Abitboul, Yohan 	Yohan Abitboul attended ENSAE Paris where he studied mathematics, statistics, and economics; he will officially receive his master's degree from ENSAE upon completion of the Berkeley MFE program. While at ENSAE, Yohan completed several statistical and programming projects including a visual association exercise using NLP. Before joining the Berkeley MFE program, he worked as a researcher in quantitative strategies at BNP Paribas and contributed to a research paper on reversal strategy. He also worked at Datascientest, a start-up that teaches online data science courses. During this internship, Yohan helped design curricula in various fields such as computer vision and reinforcement learning and held meetings for client companies' programmers. In his spare time, Yohan enjoys playing soccer and chess.
Ahmad, Aman Danish 	Aman Danish graduated from the Indian Institute of Technology Kanpur with a bachelor's degree in materials science and engineering. Before joining the Berkeley MFE program, Aman worked as a quantitative analyst at Credit Suisse in the Credit Analytics department. He was responsible for conducting quantitative impact studies to assess default risk of the bank's trading books, where he recommended risk mitigation strategies that were further utilized by trading desks for effective hedging. Aman also assisted the strategy team in development and implementation of core default risk charge methodologies using Monte Carlo simulation in R. Using the Merton model, he extensively employed multifactor models to simulate issuer asset returns, which were used to determine credit risk . Before Credit Suisse, Aman worked as an Associate at Axtria, a data science firm where he employed test -control and regression techniques to deliver insights to Fortune 500 companies. Besides quantitative modelling, Aman is also enthusiastic about learning Machine Learning applications in finance. Recently, while working on his Nanodegree AI for Trading hosted by Udacity and WorldQuant, he generated trading signals on Python and learnt how alternative datasets can capture alpha. Aman has passed the CFA level 1. In his free time, Aman likes to practice Latin dance forms such as Salsa, Bachata, Jive and enjoys participating in various dance festivals.
Ali, Hamza 	Hamza holds an undergraduate degree in computer science from the University of Punjab with a parallel undergraduate degree in Accounting and Finance from the University of Derby. During his undergraduate studies, Hamza built a strong foundation in economics, finance theory, statistics, and machine learning. While at it, Hamza also cleared CFA Level I and it was this that sparked his interest in risk modeling. After moving to the US in 2019, Hamza worked at USAA with the CCAR Team. It was here that he developed a keen interest in securitized assets and derivatives trading especially with interest rates and credit derivatives. At USAA, Hamza used real-time market data to build interest rate models such as HJM and Cox-Ingersoll-Ross models. These models were then utilized to simulate valuations for the Bank's Bond Portfolio as well as valuation of various interest rate derivatives to be used for ALM and hedging purposes as a part of the CCAR exercise. After USAA, hamza interned at IvyLine Capital Group to gain exposure into the trading area. At IvyLine, Hamza implemented lattice and tree-based simulation strategies to build quantitative simulations on equity derivatives. He used Time Series models such as Garch and EWMA to model volatility and mean-reversion. He also implemented regression-based machine learning models to build factor models for equity assets and implemented PCA to identify key factors and clean the model.

Benard, Sheldon 	Sheldon Benard graduated with a bachelor's degree from McGill University on the Dean's Honour List. Majoring in mathematics and computer science and minoring in statistics, Sheldon received both the J. W. McConnell Scholarship and Faculty of Science Scholarship for his academic performance. While at McGill, Sheldon focused on Machine Learning, participating in the ICLR Reproducibility Challenge where his team successfully replicated the results of a Discriminator Actor-Critic adversarial reinforcement learning algorithm. His studies equipped him with a solid foundation in stochastic processes, time-series analysis, probability theory, and statistical machine learning. Sheldon was introduced to financial markets while interning at BMO Capital Markets. During the internship, Sheldon and the Fixed Income Analytics team leveraged the Quorum blockchain platform to deliver the first-ever Canadian dollar fixed-income issuance on the blockchain. Sheldon subsequently joined the BMO Capital Markets Rotational Program as a Quantitative Analyst. Over the past 2 years, he has been applying technology to solve problems in the ETF, Fixed Income, and Structured Notes space. During his time on the ETF desk, Sheldon had the opportunity to explore state-of-the-art financial reinforcement learning academic papers, specifically with regard to portfolio optimization. On the Fixed Income Analytics desk, he developed a Fixed Income optimizer based on principal component analysis and formulated an attribution model for the optimizer. Further, he leveraged the Financial Information eXchange (FIX) protocol to implement a Fixed Income trading platform. With the Equity-Linked Structured Notes team, Sheldon built processes to generate bid/ask prices for BMO's structured notes and implemented a pricer for the new Fund Basket Option notes.In his leisure time, Sheldon enjoys watching, betting on, and following the statistics of hockey. Sheldon also plays electric guitar and is part of an intramural soccer team.
Bhatia, Chandi 	Chandni Bhatia graduated with a bachelor's degree from the University of Mumbai and post graduate Diploma from the National Institute of Securities Markets. Before joining the Berkeley MFE program, Chandni worked as a Market Risk Quant in the model risk management department at Morgan Stanley, where she evaluated a broad spectrum of risk and capital models in use within the bank. Her role involved questioning risk modeling methodologies and assessing model performance against actual market data. Chandni was involved in the development of various machine learning and deep learning challenger models in Python for existing market risk and fraud models for the bank. These challenger models consisted of techniques including Random forest, KNN, Convolution Neural Network etc. Leveraging her strong skills in Python, Chandni built a class based architecture to automate data parsing steps for the Credit VaR model. Under the new Basel FRTB regulations, she capitalized Morgan Stanley's linear and nonlinear market risks. At Credit Suisse, Chandni worked in two different departments: she worked as a Market risk analyst where she was primarily responsible for FDSF submission. In her second role, Chandni worked as Quantitative Credit Risk modeler where she was involved in backtesting of Credit Suisse exposure models. Her work involved running Monte Carlo simulations in R to evaluate the risk models that simulate risk factors and the consequent exposure numbers for credit products. During her tenure at Morgan Stanley and Credit Suisse, Chandni has cataloged substantial experience working with models in areas of credit risk, market risk, and PPNR. She joined the Reserve Bank of India in the Advanced Financial Research department after a postgraduate course where she worked on various projects in trade finance, banking, and Prime Minister schemes. This experience helped her develop expertise in programming languages. Chandni has cleared FRM and CQF certifications. In her spare time, she likes to play badminton, travel and listen to music.

Budhadev, Rahul 	Rahul Budhadev obtained his bachelor's degree in civil engineering and master's degree in finance from BITS Pilani, India. During his studies, Rahul worked on various research projects which were regularly presented at global and national conferences. One project evaluated the collision rate of emerging economies based on Duration Analysis, using the Cox proportional hazard model and Kaplan Meier method. Rahul presented this paper at the 52nd Annual Conference organized by The Indian Econometric Society (TIES) in 2015 as the only undergraduate student. A further paper explored the formulation of a budget allocation model across various infrastructure sectors using linear programming, to maximize macroeconomic growth in India. This was published in the Journal of Theoretical & Applied Economics, Romania. Before joining the Berkeley MFE program, Rahul worked as Assistant Vice President in the trading model validation department at Credit Suisse. He assessed the mathematical validity of modeling assumptions and implemented benchmark models using statistical tests and econometric analysis to validate the methodologies. Rahul has experience with models implementing complex stochastic processes including the 2-factor Hull-White model, the Heston process and Exponential Vasicek model. At Credit Suisse, he analyzed various pricers including equity asian options, equity swaps, bond futures and total return options. Rahul has passed the CFA Level II exam. For some time now, he has been a member of a band where he enjoys singing, playing the drums and the guitar. He also enjoys playing/watching football and traveling.
Chakraborty, Kunal 	Kunal graduated from IIT Roorkee as the department gold medalist with a dual degree of bachelor's in process engineering and master's in business administration. Prior to joining the Berkeley MFE program, Kunal spent more than two and half years at Goldman Sachs as a data science strat in the treasury division. During his experience at Goldman, he worked on multiple machine learning projects and played a pivotal role in developing the data science platform for performing fast analytics on large datasets. Kunal's expertise lies in crunching numbers and analyzing huge datasets to generate actionable insights. In addition to strong skills in statistical analysis and machine learning, he is proficient in Python/PySpark programming and software architecture. In one of the projects, he built a trade-settlement likelihood prediction model, which uses a blend of ML boosting algorithms stacked with a meta-classifying neural network to provide accurate predictions about a trade's settlement probability on a real time basis. In order to facilitate deeper intuition into the model, he implemented various research papers of ML explainability techniques like LIME and Shapley values. Kunal also has extensive experience in anomaly detection and fraud detection space, wherein he worked with controllers tech team to develop a novel algorithm to identify anomalous adjustments to P&L statements. He is very passionate about data science and machine learning and their applications in finance. He enjoys learning new tools and techniques and is a voracious reader of data science blogs. He has completed 15+ courses on MOOCs and participates regularly in data hacks and ML competitions. In his spare time, he likes to read popular science books and play soccer.
Chen, Yufei 	Yufei Chen graduated from Wuhan University with a bachelor's degree in financial engineering and minor in computer science. He is also working on an online master's degree in computer science at Georgia Institute of Technology where he has taken database design and reinforcement learning. Working as a quantitative researcher at a hedge fund in Shanghai, Yufei created more than 40 HFT signals based on various data: supply-demand, mean-reversion, technical indicators with snapshot, per trade/order data; he also developed a market making strategy for commodity futures and bitcoin futures based on HJB equations. In a subsequent role at another hedge fund, he researched the theory of blockchain, built a price forecasting model for BitCoin based on its blockchain fundamental data, as well as realized basic CTA trading strategies such as arbitrage and trend following. Additionally, in his spare time, Yufei built an auto-trading bot which encapsulated OKEx trading API (REST and WebSocket). This included an event-driven platform supporting developing trading strategies, automated trading, sending error/warning phone alerts and realized simple market making strategies, breakthrough strategies and risk control modules. In his spare time, he enjoys movies, table tennis, music and detective novels.

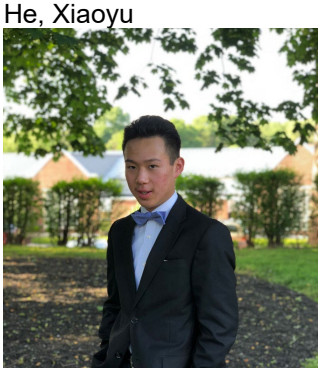
Chen, Zefu 	Zefu Chen received his bachelor's degree in agricultural engineering from Zhejiang University. During his undergraduate studies, Zefu pursued a comprehensive curriculum including statistics, applied mathematics, programming and finance, gaining analytical and technical skills which included machine learning and data mining. Before joining the Berkeley MFE program, Zefu interned at Egret Asset in China, where he designed and implemented a custom genetic programming framework to generate features of commodity futures market data for return prediction and performed statistical analysis on these. He also investigated the intra-week and intra-day pattern of stock index futures and converted these into timing strategies. Prior to his role at Egret, Zefu worked in the research department of Hwabao Securities as a quantitative research intern. He conducted Maximum Entropy Spectral Analysis (MESA) to measure the cycle of index price and generated adaptive cycle indicators and developed timing strategies using the cycle and momentum effect of index data. Zefu also interned as a strategy analyst at Industrial Securities in Shanghai. There he conducted exploratory data analysis on foreign fund holdings in listed BRICS companies and generated statistical features of the data for stock market trend prediction. Apart from his internships in the financial sector, Zefu worked as a data mining research assistant for a project on Brexit public opinion, jointly run by Zhejiang University and China Central Television. Zefu collected and processed large amounts of text data from media with web-crawler and NLP methods such as word embedding. In his spare time, Zefu loves playing guitar and travelling.
Chen, Ziao 	Chen Ziao obtained his double bachelor's degree with honours in computer science and business from Singapore Nanyang Technological University. Before joining the Berkeley MFE program, Ziao worked as a data scientist at GIC, the Singapore sovereign wealth fund. There he was responsible for building statistical and machine learning models for the external funds investment group. He worked closely with the portfolio managers in fields such as portfolio construction, portfolio monitoring and portfolio optimisation. One of the projects he worked on was to apply Natural Language Processing to extract text signals from fund reports and meeting notes, which demonstrated high predictive correlation to fund performance. Previously, Ziao also worked as a quantitative researcher in the systematic investment group where he improved an equity stock selection model to improve the sharpe ratio through residual study and factors selection. In addition, he also constructed machine learning portfolios in US equities using neural networks and gradient boost trees, which achieved >1.5 sharpe ratio. Ziao has passed CFA level III and FRM level I exams. In his spare time he enjoys badminton, basketball and dragon boating.
Cohen, Emile 	Emile attended Ecole des Ponts ParisTech where he studied applied mathematics, machine learning, economics and corporate finance. He also attended Ecole Normale Supérieure (ENS) Paris-Saclay for the MVA master program focusing on time-series, computer vision and deep learning. Upon completion of the Berkeley MFE Program, he will hold two master's degrees from Ponts ParisTech and Ecole Normale Supérieure. During his studies at ENS, Emile worked as software/data engineer with Nalia, an early stage startup in customer success, and built a fully automated pipeline predicting the churn probability of customers using tools such as Python, JavaScript and various AWS services. He led a deep learning research project reproducing SOTA results on a video question answering task using ResNet, BERT and a new Hierarchical Conditional Relational Network (HCRN), coded in PyTorch. He also developed two financial algorithms: a portfolio optimization algorithm for decentralized finance (ethereum blockchain) based on sharpe ratio, and a debt pricing model relying on financial and macroeconomic parameters for AgDevCo, a specialist investor in African agribusinesses. As an undergraduate, Emile worked as a NLP Data Scientist with Dathena in Singapore and created a fine-tuned Named Entity Recognition (NER) tool using BERT. Emile has an entrepreneurial spirit and enjoys discussing new ideas in new markets. He is a basketball player and a fan of sliding sports (surf and snowboard).

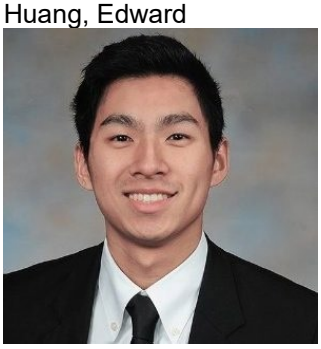
Dang, Surbhi 	Surbhi graduated from Birla Institute of Technology and Science Pilani with a bachelor's degree in computer science engineering and a master's degree in economics. During her undergraduate studies, she developed a solid theoretical and practical background in finance, statistics, mathematics, as well as a penchant for competitive programming. Her academic projects helped sharpen her technical acumen in machine learning, econometric modelling, and macroeconomic scenario analysis. She interned at IBM India Software Labs, where she used Natural Language Generation to automate comment generation for IBM's proprietary language. In her final year, as part of her Masters' thesis, she used multiple measures of liquidity, profitability, and leverage, as well as stock prices to compare and evaluate strategies in Mergers and Acquisitions. Before joining the MFE program, Surbhi spent over two years with Tesco as a Software Developer.As part of the forecasting team, she developed a highly versatile platform analysing Tesco's daily predicted sales. Surbhi also worked on a streaming application using Kafka Streams to process invoices generated every hour across all Tesco stores. As a passion project, Surbhi developed a trading bot to implement custom trend, momentum, and swing strategies to execute favourable risk/reward trades. In her spare time, Surbhi enjoys practicing badminton, boxing, and table tennis. She also likes playing poker, painting, and singing.
Das, Pradeepta 	Pradeepta received his bachelor's degree in electrical engineering from the Indian Institute of Technology in Kharagpur. During his pre-final year, Pradeepta interned at Goldman Sachs in the Equity One-Delta team where he undertook various latency reduction projects for the algorithmic trading platform. Alongside his coursework he researched various applications of Deep Learning-based super-resolution algorithms in bio-medical imaging which led to the publishing of two research abstracts and a bachelor's thesis. After graduation, he joined JPMorgan as a Quantitative Researcher where he supported volatility desks in the equity derivatives group. Working with the sales & trading team, he conceptualized and developed Factor Certificate - a structured product offering constant leverage, which is now traded on the Stuttgart Exchange. Pradeepta has also worked on a deep hedging research project where he explored the hedging behavior of barrier and cliquet products under market frictions with various Neural Network architectures such as FNN, RNN and LSTM. During the Covid sell-off period, he implemented spot correlation marking support for Monte Carlo local volatility-based derivative pricing engines as they failed to deliver the marked terminal correlations for the basket payoffs. He is passionate about contributing to the future where machines become more intelligent agents and work together with humans. In his spare time, Pradeepta enjoys following Formula 1, cricket, tennis and playing PC games.
Desai, Karan 	Karan Desai graduated from BITS Pilani with a bachelor's in computer science and a minor in finance. As a part of his undergraduate studies, he carried out research in denoising stock market returns using autoencoders and PCA. As an undergraduate student, he interned at the Custody and Fund Services quant department at JP Morgan, after which he was offered a return offer in the Treasury Credit Risk division. During his time there, he was tasked with building a model for current expected credit losses for US municipal bonds which was subsequently used in CCAR as a part of Basel III regulations. This experience helped him understand econometric techniques used to model call risk and default risk in bonds. He was also responsible for developing a framework using Python and VBA to assess the impact of Covid-19 on CIO's portfolio as well as the broader credit market. Through these responsibilities, he became proficient in Python and was also able to apply his theoretical knowledge to real life problems in finance and gain market intuition. Karan has passed the CFA Level 1 exam and also has a Bloomberg Market Concepts certification. In his leisure time, he likes to read, play soccer, and travel.

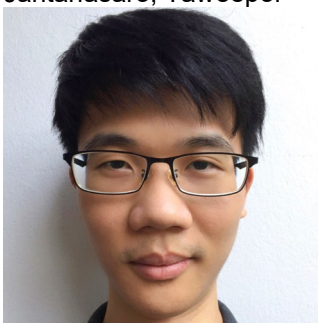
Dillies, Theo 	Theo attended ENSAE Paris where he developed solid skills in statistics, econometrics, financial mathematics and machine learning using different languages (Python, C++ and R). He will officially receive his master's degree from ENSAE upon completion of the Berkeley MFE program. During his studies, he implemented different trading strategies in Python and an option pricing model using Monte Carlo methods in C++. Prior to joining the MFE program, he interned for six months as an exotic equity & index derivatives trading assistant at Credit Agricole. Beyond supporting traders by developing tools for risk monitoring and P&L analysis, Theo was also responsible for developing and calibrating new dividend dynamics with the quantitative research team. He has also completed several online courses in deep learning in Python. Theo has a keen interest in systematic trading, quantitative strategies and new technologies. In his spare time, Theo enjoys practicing gymnastics and boxing.
Dong, Xinyu 	Xinyu graduated from UC San Diego with a bachelor's degree in applied math, where she gained a solid foundation in programming, stochastic calculus, and statistics. Before joining the Berkeley MFE program, Xinyu interned at Shanghai Suntime Information Technology, one of the top financial data and analytics companies in China, and was responsible for conducting quantitative research in Python to support funds trading. She designed a LSTM deep learning tool which utilized net asset value and trading factor returns to estimate factor exposures of funds. In her senior year, she interned at Caltech as a data analyst to apply mathematical and statistical concepts to real life problems using Python and MATLAB. Xinyu also interned at PwC as an auditor as well as at China International Capital Corporation in investment banking. Xinyu has also completed several courses in machine learning and deep learning hosted by Coursera and Udacity, and passed the CFA Level I exam. In her leisure time, Xinyu is a vlogger and loves to travel with friends. She enjoys music, movies and romantic rainy days. Call it ambitious, but her life-long goal is to influence 100,000 people at least.
Gao, Hang "Sunny" 	Hang Gao received his bachelor's degree with honors in applied mathematics and statistics from the University of California, Berkeley, where he began his passion for applying advanced mathematical and statistical analysis in the financial markets. Under the guidance of the Department Chair he began his journey at UC Berkeley conducting research on the feasibility and success of opening celebrity restaurants by using dynamic programming. Working with a precise model defining the factors influencing the success of these venues, he published a paper "Success of Celebrity Restaurants" and was awarded the "Best Project of the Year" in the Department of Statistics. As a summer intern with Morgan Stanley, he focused on Chinese A share transactions and IPOs: he collected company financial data to build an ADS analysis model, priced derivatives and worked on research projects including the status and future of the pension real estate market.This experience encouraged his interest in AI and Hang subsequently took more classes in computer science and became proficient in developing algorithms in Python, C++, and SQL. After graduation, Hang chose to intern at the high-tech unicorn, Ant Group. Working in the risk management team, he sharpened his skills in machine learning and used NPL, textCNN and other various deep learning algorithms to combat online money-laundering. He also helped to develop a unique system of mutual conversion of simplified Chinese, traditional Chinese, Hanyu Pinyin, Wade-Giles romanization and other phonetic methods to prevent possible identity theft. Lastly, he was part of a team that developed a logic graph to evaluate borrower's credits. Hang enjoyed learning how to apply machine learning to help price and predict the price of derivatives in the financial industry. In his spare time, he enjoys playing basketball and watching movies.

Garg, Srajan 	Srajan graduated with a Bachelor of Technology (B. Tech) in Computer Science with honors from the Indian Institute of Technology (IIT), Bombay in 2018. Apart from gaining an excellent command of core computer science concepts, he also built a strong foundation in mathematics, statistics and applied machine learning. An internship at Jane Street Capital as a software developer served as a solid introduction to the world of finance and he subsequently joined Tower Research Capital as a High Frequency Strategist. There, he traded several commodity derivatives across financial exchanges, which recorded a profit of over $40 million in 2019. He was primarily responsible for managing trading activities in asset classes including precious metals and petrochemicals in the Multi Commodity Exchange (MCX) in Mumbai, Shanghai Futures Exchange (SHFE), and Shanghai Gold Exchange (SGE) in China. He was responsible for building new technical indicators to model market movements, improving the existing signal building and strategy optimization pipeline, developing and maintaining a highly optimized C++ framework used to write strategies and analyzing market opportunities and behavior to determine the risk and exposure to be taken. Finally, he was also responsible for deploying, executing and monitoring the final strategy. He now looks forward to gaining a new perspective on the overall market dynamic through a more rigorous and theoretical understanding of financial markets. His short-term career goals aim at utilizing state of the art machine learning to quantitatively trade portfolios in a reputed hedge-fund or high-frequency trading firm. He's excited about grasping the workings of hedge funds and would like to expand his horizon on mid-frequency trading, while leveraging the insights and foundation he has gained from his high-frequency experience. He pursues swimming and acrylic painting in his spare time and holds a penchant for maintaining an eclectic and fresh music taste.
Gautier, Marin 	Marin Gautier has managed to combine two passions at a high level: math and sports. Upon completion of the Berkeley MFE Program, he will also officially graduate with dual master's degrees in mathematics and finance at ENSTA and ENSAE Paris. In parallel, after reaching national level in climbing and biathlon, Marin is now competing in the French professional triathlon league. While pursuing his master's at ENSAE, Marin completed various projects on pricing and hedging a wide range of exotic financial derivatives through different methodologies including Monte-Carlo methods and partial differential equations. He also developed specific knowledge in machine learning, neural networks and linear regression with numerous programming languages: Python, Matlab, RStudio and C++. Mathematics is a real passion for Marin. He has a strong background in probability, statistics, stochastic calculus, and time-series analysis. He has also been able to share his knowledge as an instructor at engineering schools. Marin has enjoyed the discipline of high performance and achievement that both sports and mathematics demand.
Goel, Krishna 	Krishna graduated from Rice University with a bachelor's in computer science and extensive coursework in statistics. While in college, he interned as a software engineer at a loan aggregator his sophomore year and was part of a founding team for an e-commerce platform his junior year. During his studies Krishna developed a keen interest in artificial intelligence, which he pursued through his academics while simultaneously undertaking research projects with professors. These included using various data science packages in Python such as Keras and Tensorflow to create CNNs and GANs. In his final year Krishna interned at AQR Capital as a software engineer where his performance led to a return offer. That same summer, Krishna started trading in equities and equity-options, thereby discovering his passion for investing. After graduating in May 2020, Krishna started to work at AQR full time as part of their systematic trading engineering team. He quickly learned and utilized languages he did not have prior exposure to such as Go and C# and consistently received excellent feedback from his managers regarding his performance. Krishna pursued his interests in investing and quantitative research on financial markets by partaking in seminars at AQR which addressed portfolio management and research. In his spare time Krishna enjoys playing card games, chess, jogging, and practicing the guitar.

Gong, Chu 	Chu Gong graduated from Beihang University in Beijing with a bachelor's degree in financial engineering and double major in applied mathematics. Before joining the Berkeley MFE program, Chu worked at Harvest Fund Management DataLab as a data modeling intern. During this experience, she was responsible for modeling implied market valuation for corporate bonds via probability models and developing liquidity and trade cost measures for fixed-income traders. Chu also built a complete Python package for valuation and liquidity modules to achieve an automatic pipeline system for ETL, model training and results presentation. During her undergraduate studies, Chu interned at PBC School of Finance, Tsinghua University, and conducted quantitative research on factor models, which greatly improved her understanding about factor investing and how these effects vary in Chinese market. Chu has passed the CFA Level I exam. Besides professional certificates, Chu pursued online Coursera courses to satisfy her curiosity and passion about new trends and technology. In her spare time, Chu enjoys listening to music, playing piano and photography.
Gulati, Neil (Part-Time) 	Neil graduated from University of California, Irvine in 2013 with a bachelor's degree in mathematics. For much of his life, Neil was an international trampoline gymnast and competed in various events including: as a member of the Senior National Team, 5 World Championships, 3 Olympic Trials, 4 World Cup Circuits, and the World Games. While a student, Neil worked as an acrobatic performer to help fund his education, and performed half-time shows for NFL, NBA, FIFA, and NHL games. He has performed for crowds of over 100,000 people and has competed on NBC's 'Ninja Warrior' and 'America's Got Talent'. In order to help fund his training expenses, Neil worked as a rank 1 coach and rank 1 judge working with athletes competing at the national level and served as the chair judge for several National Championships. After graduating from university, Neil successfully passed the probability and financial mathematics actuary exams, the latter sparking his interest in quantitative finance. Prior to joining the Berkeley MFE, he worked as a supply chain analyst in the medical device industry which is where he developed a passion for data analysis and cultivated his leadership skills. Neil is pursuing a career in financial engineering as it encompasses his passion for mathematics and finance and requires the dedication and drive of an athlete. In his spare time, Neil enjoys surfing, freediving and playing tennis.
Gupta, Ayush 	Ayush Gupta graduated with bachelor's and master's degrees in computer science from the Indian Institute of Technology, Delhi. During his studies, Ayush undertook a project in computer vision for tracking socio-economic conditions using satellite imagery which led to publication. For his masters thesis, he worked on building a pipeline for constructing Open Knowledge Graphs from large unstructured texts using NLP and Information Retrieval algorithms. He also served as a teaching assistant for post-graduate advanced data structures class and freshman CS class. After graduation, Ayush joined Goldman Sachs as a Strat in the Global Markets Division. He worked on modelling discount curves required for derivative pricing. In addition, he was responsible for building Infrastructure critical for Libor Transition of firm-wide trades. Ayush volunteered for mentoring new analysts in a Covid Visualisation Datathon and designing quant questions for university recruitment. Ayush also interned at Works Applications where he built a recommendation engine for their enterprise software using Data Mining techniques. Ayush also worked as a Summer Analyst in the Risk Division at Goldman Sachs where he built a data-driven framework for finding errors in regulatory stress reports. Ayush is a bronze medallist in the Asian Physics Olympiad. He enjoys listening to EDM, lo-fi Music and loves reading Philosophy, Tech and Productivity Blogs.

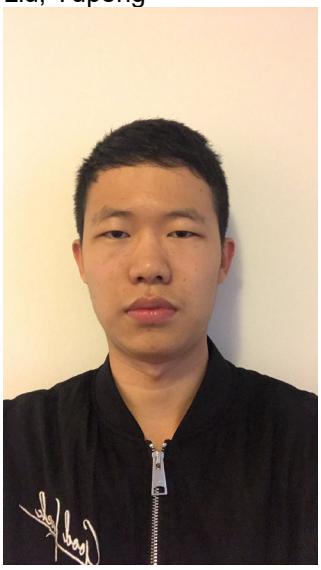
He, Peixuan 	Peixuan He received her bachelor's degree in financial engineering from Wuhan University. Coursework included dynamic optimization, time series, C++, and other quantitative disciplines and she successfully built a solid foundation. She was an algorithm engineering intern at Ping An Technology, a fintech company in Shanghai, where she performed database maintenance and feature engineering tasks in SQL and PySpark. She also performed a project to classify listed companies by industry and region with the hierarchical clustering algorithm to improve the financial fraud warning model. Additionally, she used the core person and companies' data, applying Page Rank and Louvain algorithms, which helped warn management of financial risk in the capital group. Prior to her experience at Ping An, she interned with Huatai Securities Financial Engineering Team in Shanghai, where she developed her passion for machine learning. She conducted research on multi-factor black box models explainable in several methods, e.g. ICE, LIME, and Shapley value. She introduced each method in detail, applied them to the XGBoost model, and compared their strengths and weaknesses. She did some research on SQP optimization and SmartBeta indices as well. Before the MFE program, she took deep learning, numerical analysis, and other quantitative courses in Coursera and completed a nano-degree in machine learning engineering at Udacity. In her free time, she likes swimming and baking.
He, Xiaoyu 	Xiaoyu He graduated from the University of California, Berkeley, with a bachelor's degree in electrical engineering and computer sciences. During his undergraduate studies, Xiaoyu led the course staff teams on different subjects, including Probability Theory and Random Process as well as Artificial Intelligence, honing his math, statistics and computer science skills. In addition, Xiaoyu completed two internships in the finance sector. As a quantitative developer at Evolution Labs, a private trading firm in Shanghai, he designed and established a portfolio optimization algorithm based on the Markowitz Mean-Variance Model using Python. His mandate was to resolve a variety of issues - from sparsity and overfitting to biased estimation of the sample covariance matrix - to boost the strategy's performance. In addition, he rebuilt over 15 packaged Pandas methods into customized versions using a C-like structure, reducing their average runtime by over 80%. The final algorithm provided a successful pipeline for combining and optimizing the previous strategies developed by the company, and it was approved to manage the commodities portfolio in the real-world market. Xiaoyu speaks fluent English and Chinese, and has studied Latin and Greek for four years. In his spare time, he loves reading, traveling, and playing poker.
Herbein, Alexandre 	Alexandre attended EDHEC Business School where he studied financial derivatives, econometrics, macroeconomics as well as corporate finance and ranked in the top 5%. He will officially receive a Master in Financial Economics from EDHEC upon completion of the Berkeley MFE Program. During his engineering undergraduate studies, Alexandre developed a solid background in mathematics, physics, numerical methods as well as Python and C++. While an exchange student at the University of Durham, he completed master's courses in financial risk management, market microstructure and portfolio management. His professional experience at Societe Generale in Paris equipped him with a strong understanding of derivatives strategies and financial markets. As part of the sales team for cross-asset structured products, he was exposed to a wide range of strategies including exotic features on various asset-classes and indices. Alexandre designed and optimized back-testing tools with the structuring team for several autocallable products targeting European institutional clients. He also had the opportunity to improve his programming skills by automating some of these processes. In his spare time, Alexandre enjoys playing the piano and reading about economics. He is also passionate about motorcycles and has taken several road trips abroad with friends.

Hong, Taige 	Taige graduated from Northwestern University with a bachelor's degree in industrial engineering and a combined master's degree in computer science. During his studies, he interned at a Beijing-based securities company where he designed and prototyped an automatic factor mining program using Python to support the multifactor investment decision model. Taige also regularly immersed himself in the field of data science: he enrolled in several courses in machine learning and developed a deep understanding of the models' uses and limitations, along with their application to the finance market. Before joining the Berkeley MFE program, Taige worked in a medical research lab to further strengthen his data analysis skills. He optimized the processing time of a series of RNA-sequencing experiments on large raw data sets and greatly accelerated the lab research. During his spare time, Taige enjoys playing card games and cooking.
Huang, Edward 	Eddie Huang attended UC Berkeley where he majored in Economics. During his undergraduate studies, Eddie developed a foundation in mathematics, statistics, and physics, but specialized in financial markets and macroeconomic policy. Eddie started his career as a Sales and Trading Analyst at Citigroup where he developed regression models to identify price to fair value dislocations and used quantitative skills to analyze data and propose trading ideas. While working at GitHub, Eddie leveraged his programming skills to lead data driven business decisions in launching and pricing new products as well as engineer new database infrastructure. Eddie has combined the programming and finance skills as a Quantitative Researcher at GMO to research and create alpha signals. Personal projects Eddie has taken on include building machine learning models aimed at predicting user churn and spam detection. In his free time, Eddie enjoys surfing, skiing, cycling, and playing soccer.
Jain, Apeksha 	Apeksha Jain graduated with honours from BITS Pilani in India with a bachelor's degree in computer science and a master's degree in mathematics. Her summer internship in the quantitative research team at JP Morgan introduced her to the field of quantitative finance. There she worked on the development and the implementation of a closed form solution for T/T-1 Corridor Variance Swap Instruments. During her final year of graduation, she served as an off-cycle intern at Moody's Analytics Knowledge Services in their Quantitative Services team where she primarily worked on providing FX and interest rates hedging solutions to large enterprises in collaboration with a European bank. Post graduation, she joined JP Morgan full-time as part of the Equity Derivatives Group Modelling Team where she worked on various projects which helped strengthen her programming skills in Python and C++ and further sharpened her acumen in mathematics and finance. She was tasked with performing reviews of the firm's mathematical models for Barrier and Delta 1 products in the equity domain for the Market Risk Team and was also instrumental in automating the Model Usage Restrictions framework and implementing a framework for the Fundamental Review of Trading Book. As a part of her thesis at the Hanlon Financial Systems Lab at Stevens Institute of Technology, under the supervision of Dr. Ionut Florescu and Dr. Mayank Goel, Apeksha developed a feature selection algorithm for accurately predicting the credit ratings of any company from its balance sheet financials and financial ratios. This helped her hone her data science skills and expand her statistical knowledge. Apeksha has passed the CFA Level 1 exam. She is a trained Indian Classical singer and a dance enthusiast. In her leisure time, she also enjoys reading, graphic designing and playing basketball.

Jantanasaro, Taweepol 	Taweepol holds a master's degree in finance and a bachelor's degree in economics from Thammasat University in Thailand. He has three years of experience working as an internal auditor at the Bank of Thailand with a focus on auditing the reserve management process. This work has allowed him to understand the end-to-end investment process ranging from portfolio construction and trading through to risk management.He later moved internally to the financial risk management department where he worked for another three years and was assigned many important projects including revising the risk management framework of reserve management and developing tools to monitor risk using advanced financial knowledge. This involved incorporating vine copulas into risk analysis and machine learning to assist in developing early warning indicators. He was also involved in setting up different emergency policies to alleviate the financial and economic shock from the Coronavirus pandemic. Outside of his formal responsibilities, he was chosen to be a member of the Risk Management Subcommittee for Bank of Thailand Employees' Thrift and Credit Cooperatives which oversees the investment risk of the employees' savings. He has passed the CFA Level 3 exam. In his spare time, Taweepol enjoys playing soccer, badminton, and table tennis as well as reading economics and sports news.
Kazmane, Ali 	Ali will hold a Master of Financial Engineering from UC Berkeley and a Master in Financial Economics - Applied Mathematics (Double Major) from EDHEC upon completion of his coursework at Berkeley. Using different programming languages (Python, R and C++), Ali completed several research projects including his master's thesis on factor selection in finance. He was able to review asset pricing models and risk premia using machine learning and dimension reduction techniques (Python implementation). He has a solid understanding of complex financial products and has participated in many automatization projects and coded a (faster) PNL reconciliation program in Python. During an asset management internship he conducted research on the application of Arima/Garch in portfolio optimization problems (R implementation). As a high school student in Morocco, Ali played in an U17 soccer team which helped him develop a winning mindset and discover the importance of a team. He is also interested in geopolitics and Formula 1.
Kumar, Pankaj 	Pankaj Kumar holds a bachelor's degree from the Indian Institute of Technology (IIT) Bombay, where he developed a strong foundation in mathematics, statistics, and programming through his involvement in various research projects and internships. Overall, he has more than four years of professional experience in the investment management and financial services domain. After graduating, he joined MSCI's quantitative risk team where he was responsible for creating and maintaining models for the calculation of Credit and Market exposures. He worked with risk team members in Boston and Japan for reporting existing and incremental risk metrics in swaps and other exotic instruments across major asset classes. He also built analytical tools and computations using Excel and Python. Pankaj then worked in the Global Equity Beta Solutions team at StateStreet Global Advisors as a quantitative ESG researcher. He was responsible for creating equity portfolios for institutional clients and conducting performance attribution analysis using factset and Bloomberg. He was actively involved in research on new ESG factors including GHG emissions and climate metrics and carried out factors integration (reduced carbon, mitigation - adaptation) into client's systematic investment strategies. Pre-MFE, Pankaj interned at a medium frequency hedge fund where he worked on generating systematic trading signals (alphas) for Indian equity markets. His research ideas leveraged news-based sentiments, technicals, group momentum, ex-ante & ex-post returns. He has also completed independent coursework in Machine Learning Engineer hosted by Udacity. He has cleared CFA level 3. Pankaj is an avid cricket enthusiast and likes to listen to music in his spare time.

Lanza, Francisco 	Francisco holds a bachelor's degree in actuarial sciences from University of Buenos Aires and a master's degree in finance from University Torcuato Di Tella. During his studies, he developed a solid foundation in Stochastic Calculus and Time-Series Analysis, a deep understanding of Macroeconomics and Financial Markets, and proficient programming skills in Python, R, MATLAB, and VBA. He joins the Berkeley MFE program with more than five years of banking, structuring, asset management, and financial securities trading experience. Most recently, Francisco worked as an FX Derivatives Trader at Banco Galicia in Buenos Aires, where he traded delta one derivatives on Argentine Peso in both local and offshore markets. During periods of record-high volatility, he built an excellent track record and generated USD 78 million in profits over three years. Francisco also worked as a Fixed Income Trader, making markets on Argentine Provincial and Corporate bonds in local and foreign currency, and managing a USD 300 million portfolio. He also designed and structured interest-rate and currency risk hedging solutions for institutional clients. In his spare time, Francisco plays football and tennis, produces electronic music, and enjoys occasionally performing as a DJ at nightclubs, bars, and parties.
Laouedj, Abdelmadjid 	Abdelmadjid graduated from CentraleSupélec with a MSc in engineering where he had the opportunity to develop strong skills in economics, stochastic calculus, statistics, machine learning and deep learning. His experience in the finance division of Gustave Roussy (the largest cancer center of Europe) allowed him to deepen his financial and programming knowledge. There, he was responsible for modeling and predicting the cash flow of the center; he collected large datasets and implemented a highly accurate model using time series prediction. In addition, he made investment recommendations using excess cash flow. Abdelmadjid also worked at Natixis as a financial engineer in the equity derivatives structuring team. He was in charge of designing and determining the price of structured financial products to meet clients' (hedge funds, insurance companies) needs using computer models as well as computing automated algorithms to support the team. Beyond his interest in financial engineering, Abdelmadjid is passionate about aviation and philosophy and enjoys playing sports, especially French boxing.
Lei, Chunyan 	Chunyan graduated with a bachelor's degree in risk management and insurance from Peking University where she built a solid foundation in finance, mathematics and programming. She was selected as one of the six international ABSIP scholars by the Risk and Insurance Management Society in 2018 due to her outstanding performance in the field. During her studies, Chunyan interned with the risk control team of China International Capital Corporations where she was mainly in charge of portfolio risk analysis, data cleaning and data maintenance with Python and SQL including creating an automated tool to optimize the risk report generating process. Chunyan also interned at CITIC securities with the performance valuation team, where she developed a multi-period Brinson model with carino smoothing algorithm and a Campisi model for fund performance attribution, and used the docxtpl package in Python to realize automatic report updates. Chunyan also interned at a hedge fund in Beijing where she constructed a multi-factor framework and built a news sentiment factor using various weighted methods including PCA and IR maximization with Ledoit-Wolf covariance estimates. Before joining the Berkeley MFE program, Chunyan enhanced her machine learning and data science knowledge through Coursera, EdX and Udacity projects. Chunyan has passed the CFA Level I exam. In her spare time, Chunyan enjoys listening to music and studying foreign languages.

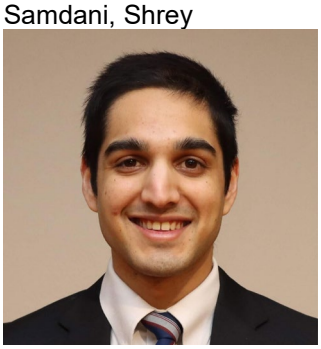
Lei, Ranran 	Ranran Lei received her bachelor's degree in finance from Fudan University. During her undergraduate studies, Ranran enlisted in a comprehensive curriculum including statistics, programming and finance and her interest in data science encouraged her to take some basic courses in machine learning. Before joining the Berkeley MFE program, Ranran interned as a quantitative researcher at Luoshu Investments and Brightridge Investments. At Luoshu, Ranran investigated the momentum effect and CTA strategies of commodity futures and created effective factors, reaching a Sharpe ratio of 2.5. On a further project, she utilized the BAW model to calculate the implied volatility through optimization methods, such as Newton-Raphson and Dichotomy. Ranran continued to apply her interest in quantitative finance with a project in high-frequency trading research. Based on the microstructure of Chinese financial markets (including stocks, futures, convertible bonds) and the bitcoin market, Ranran utilized C++ programming to develop and implement several price forecast signals from the orderbook and transaction data, such as the imbalance of ask and bid size. Not only did she guarantee the stability of signals, but ensured prompt convergence and norm-like distribution of all the signals without weakening the performance. She also applied some machine learning models such as ridge regression in her predictions. In her spare time, Ranran enjoys Chinese traditional painting and climbing.
Lertpienthum, Kanchanit 	Kanchanit graduated with a bachelor's degree in economics from Thammasat University in Thailand. While an undergraduate, she participated in many competitions including National Economics Contests, CFA Research Challenge and various Business Case competitions. Her first internship was with the Bank of Thailand where she performed research on the labor market, identified key gaps between labor demand and supply and then tried to solve the existing gap by utilizing a scholarship scheme Later, she interned as an investment banking analyst,where her responsibilities included conducting a valuation analysis for IPO stocks and real estate investment trusts, collecting and analyzing the related market data, running sensitivity analysis on the valuations , as well as writing and compiling data for the filing documents. Her most recent internship was as a project analyst for a real estate development company where she analyzed the project feasibility, financing options and projected cash flow for a residential project with a market value of $8,000,000. Kanchanit is currently working as a risk management officer at the Bank of Thailand with responsibility for overseeing portfolio performance, assessing the validity of current portfolio mandates, investment criteria and risk measures, quantifying risks of new mandates and investment schemes, as well as keeping track of potential risks arising from the global markets.In her spare time, she enjoys reading, and coaching for the business case competition club that she co-founded at Thammasat university.
Li, Xinyu 	Xinyu Li graduated from Tsinghua University with a bachelor's degree in automation and a double major degree in economics. He will also receive a master's degree in finance from Tsinghua University upon completion of the Berkeley MFE program. During his studies, Xinyu gained a solid background in deep learning, statistics, econometrics, and financial derivatives. In addition, he gained proficiency in C++, Python, Matlab, and C#. During a research internship at Tsinghua University, Xinyu theoretically modeled the turbine engine degradation and used the LSTM model for dynamic maintenance planning, the results of which have been applied in multiple practical engineering projects. Xinyu also completed four internships in quantitative finance covering Alpha research, CTA strategy, FOF investment strategy, and derivatives trading. As a quantitative intern at Lingjun Investment, the top quantitative hedge fund in China, Xinyu conducted research in developing daily high-frequency alphas using Level-2 price and volume data. He identified over 50 qualified alphas with a Sharpe ratio over 5 and correlation under 0.7 based on Linux system backtesting. He also interned as a financial engineer with Huatai Securities, where he built a fund-style classification algorithm and initiated the FOF strategy based on a Fourier transform and multifactor model. While working as a futures quantitative research intern at Shenwan Hongyuan Group, he independently proposed the main position analysis model based on resistance support relative strength and developed the trading strategy. In his spare time, Xinyu enjoys socializing with friends, playing badminton, and cycling.

Li, Yijie 	Yijie received her bachelor's degree in economics from Nanjing University. She is passionate about financial engineering and interested in applying quantitative methods to solve financial problems. As a quantitative strategy assistant, she built econometric models to reveal the relationships among the prices of different futures to develop trading strategies, and optimized trading signals in the backtesting. During her internship with Guotai Junan Securities, Yijie developed insights into commodities by optimizing a statistical arbitrage strategy on the silver price difference between two markets. More recently, Yijie worked at a fintech where she used Python and SQL to design and backtest factors for industry research and model development. Yijie is also interested in machine learning and data analysis and has earned the machine learning certificate from Coursera. On one project, Yijie adopted the Gini Index and Information Gain method for data mining, and employed LSTM, GRNN, and PNN to predict the stock market. Her main hobbies include piano, Chinese Calligraphy, hiking, and watching tennis.
Liang, Rongbing 	Rongbing received his bachelor's degree in finance from Zhejiang University and holds a master's degree in statistics from Columbia University. He most recently worked full-time as a CTA strategy developer in a small Beijing-based hedge fund where he devised a short-term trend-following system with EDR position sizing to trade on selected futures. He also examined and identified momentum patterns and tested multiple settings of trend-following trading rule optimizations. In addition, Rongbing interned with several large securities companies where one of his assignments was to develop a risk monitoring system algorithm which tracked listed companies via NLP techniques and ensemble modeling based on SVM and random forest. Apart from finance and statistics, he is proficient in accounting and is a member of CICPA (Chinese Institute of Certified Public Accountants). Rongbing has enhanced his machine learning skills by taking electives and participating in Kaggle competitions and recently gained certification as a junior psychological counselor.
Liu, Yupeng 	Yupeng earned his bachelor's degrees summa cum laude in financial mathematics from CUNY Baruch College and Southwestern University of Finance and Economics in a double-degree program. Before joining the MFE program, he interned at Guotai Jun'an Securities, one of the largest securities companies in China, as a quantitative researcher focusing on Fund-of-Funds (FOF) strategies and asset allocation models. He carried out factor-mining for funds, constructed a FOF strategy which tried to exploit market signals and select high-alpha funds, and built a model completing the holdings of funds with limited public information, which was published in a widely-read research report. He also researched multiple asset allocation models including Hidden Markov Chain. Yupeng also gained experience at Suntime Corporation, a leading Chinese fintech, where he successfully constructed a factor model for stock based on a factor database, and built an entire top-down quantitative strategy including asset allocation, sector rotation and fund evaluation. Yupeng also worked as a research assistant in Support Vector Machine which served as a solid foundation in machine learning. In his spare time, Yupeng enjoys traveling, playing soccer and skiing.

Loo, Marc-Antoine 	Marc-Antoine holds a MSc in international finance from HEC Paris with a specialization in Financial Markets and a Master of Engineering in Systems from UC Berkeley. Before that, he obtained a Master of Science in Civil Engineering from ESTP Paris, where he graduated 1st out of 165 students. Throughout his studies, Marc-Antoine developed a strong background in Mathematics, Financial Markets and Data Science. While preparing for the MFE, he also improved his programming skills by taking courses on Machine Learning, Deep Learning and C++. His professional experiences at both Société Générale and Google equipped him with a solid knowledge on equity derivatives products and strengthened his Python programming skills. As an equity derivatives structurer at Société Générale, Marc-Antoine worked on the pricing of structured products with a focus on autocallable products, on the development of new derivatives products and equity indices and on the implementation of back-testing tools for systematic trading strategies. He was also in charge of several automation tasks using Python. During his time at Google, he developed a virtual reality system based on machine learning methods to analyze Google's patent portfolio. Marc-Antoine also conducted numerous programming projects, such as his Master thesis at HEC Paris, which consisted in implementing a basket optimization tool for multi-underlying products using Python. In his spare time, he practices Martial Arts at competition level and enjoys shaping and selling surfboards as well as having his own business customizing and selling sneakers. Passionate about social work, Marc-Antoine has taught Mathematics as a volunteer for more than 6 years.
Lucien, Frédéric 	Frédéric attended ENSAE Paris where he studied applied mathematics, statistics, and economics. He will officially receive his master's degree from ENSAE upon completion of the Berkeley MFE program. While at ENSAE, Frédéric developed solid skills in probability, statistics, and machine learning using different languages (mainly Python, R and C++), and completed several projects in statistics. In a project in collaboration with ScreenSeed, he implemented a Machine Learning system which classified seed pictures using Neural Networks and Random Forests. He also worked on industrial index prediction using time series analysis, automatic investment strategy in Python and unbiased Markov-Chain Monte Carlo methods in R. Before joining the MFE, Frédéric worked as an intern at BTP Banque Ecofi where he rotated through all departments including credit, trading, risk and asset management. During an internship at Rothschild, he worked on a quantitative decision making tool for the stock market and carried out financial analysis work on listed companies as part of the asset management team. Frédéric has a keen interest in algorithmic trading and quantitative strategies. During his spare time, he enjoys competitive skiing and snorkeling.

Madayan, Alec 	Alec holds a bachelor's degree in econometrics and a master's degree in economics from University of Paris, Panthéon-Assas. He also graduated from ESSEC Business School with a master's degree in financial techniques. He enrolled in a master of research in artificial intelligence and data science from PSL University (joint degree between Paris-Dauphine, ENS Paris & Mines ParisTech) before attending the Berkeley MFE. Deeply interested in investing, has considerable experience in quantitative investment strategies and economic modelling. First, at Exane in fixed income research, where he developed a tool for pricing and trading CoCo bonds using R, involving exotic options, stochastic volatility models and Monte-Carlo simulations. He also worked on ARDL-ECM modeling for government debt pricing. This led to the redaction of a master's thesis at ESSEC, where he was the only A+ of the cohort. He then worked in quantitative research at BNP Paribas Asset Management on both volatility and systematic option overlay strategies. The strategies were developed in Python mainly using equity options but involved some aspects on the credit side as well. Alec is also interested in artificial intelligence and machine learning. He got entrepreneurial experience at Dental Clinic Awada where he developed deep learning algorithms to detect dental anomalies on dental panoramic X-Rays. Also, in the context of his master in artificial intelligence, he worked on several long-term projects covering, among others, linear bandits and reinforcement learning, NLP for investing, prototypical network and latent space, optimization and mathematical properties. In his spare time, Alec has been the co-manager and a player of Mythix Esport, one of the best professional teams at the time in video game tournaments. He is also a long-term subscriber to the Financial Times and has a strong interest in soccer, Middle East politics, macroeconomics, and Lebanese cuisine.
Marshall, John 	John graduated from the University of Chicago with a bachelor's in economics and statistics. After graduating, he joined a proprietary market making firm, Cardinal Capital Management, as an assistant trader. He spent a year in this role to learn the industry by clerking on both the Chicago Mercantile Exchange and the Chicago Board of Options Exchange before becoming a floor trader on the CBOE's S&P 500 trading pit and joins the Berkeley MFE program with more than five years' experience as a floor trader John and all the floor traders participated in daily morning meetings breaking down part of the term structure to communicate the most pressing positional concerns to the risk management team to properly hedge their aggregate portfolio. In addition, the floor traders would communicate recent order flow trends for the respective brokerage group they covered to be prepared for market moving orders. In the evenings, he would collaborate with his upstairs team on data driven projects to help improve his firm's algorithmic strategies and look for market pricing inefficiencies. He also worked with CCM's team of developers to help them design new functionalities necessary to thrive in the modern-day floor market making world. John has taken various MOOC courses including the machine learning certificate from Coursera, Baruch University's C++, and several others to better position himself for the future of the industry. John is also passionate about education and has spent the past four years volunteering for Minds Matter Chicago, first as a test prep instructor and then as a co-director of the test prep program. In his leisure time, John enjoys playing chess, reading philosophy and baseball analytics.
Peng, Yuting 	Yuting received his bachelor's degree from Southwestern University of Finance and Economics with a major in finance. He will also receive a master's degree in finance from Tsinghua University upon completion of the Berkeley MFE program. During his graduate studies, Yuting completed coursework in programming, mathematics, statistics and finance. While interning at China International Capital Corporation as an equity derivatives trading intern, he designed and priced 8 new exotic options and swaps as well as developing an algorithm to plot volatility surfaces. At Huatai Securities, he gained exposure to asset allocation strategies and obtained periodic signals from security indexes and commodity prices and transformed periodic signals to market timing parameters. Yuting is also passionate about machine learning and has completed various projects through Coursera. In his spare time, Yuting enjoys soccer, going to the gym, tennis and travel.

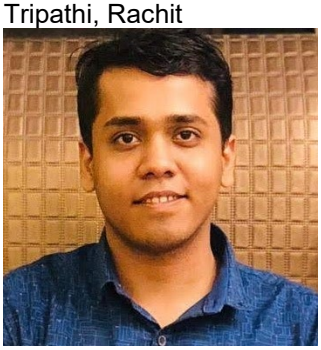
Prasad, Shiwangi 	Shiwangi holds a bachelor's degree in electronics and communication from BIT Mesra and an MBA from Indian Institute of Management, Indore with a specialization in finance. She is a certified FRM and has successfully passed the CFA Level 2 exam. She joins Berkeley with more than 5 years of work experience in financial risk management. Shiwangi started her career with Royal Bank of Scotland as a Risk Analyst where she managed the risk of a ~£40bn RBS pension portfolio. She conducted regulatory stress testing (e.g. EBA and BoE) to assess the impacts of extreme stresses on the capital requirement of the bank. Shiwangi successfully migrated the stress testing process from London to India, and worked on streamlining the process which resulted in considerable cost saving for the bank. Subsequently, Shiwangi worked with Deutsche Bank as an Associate in their treasury risk team where she was responsible for managing risk projections. She built a Python-based analytical tool which supported the assessment of the impact of new trades on Value-at-Risk (VaR). In preparation for the MFE program, she also completed independent coursework in machine learning, deep learning, Python and R programming. In her free time, Shiwangi likes playing board games and reading. She also enjoys travelling and has explored 17 countries to date.
Ren, Zhihao (Chris) 	Zhihao (Chris) Ren obtained his bachelor's degree at The Hong Kong Polytechnic University, majoring in applied mathematics - investment science, where he gained essential statistics, finance, and computer science knowledge. He also obtained the Entry Full Scholarship and the Outstanding Student Award at the School of Applied Science. His final year thesis --'Optimal Stopping under Model Ambiguity'-- centered on a time equilibrium approach for optimal stopping which was applied to options exercise strategies. Zhihao is enthusiastic about quantitative research and quantitative risk management, areas in which he has corresponding professional experience. During his 4-month contract at Rivermap Quantitative Research in Hong Kong, an internship at Ageon-Industrial Fund and a project at GuoFu Futures, he had hands-on experience in constructing factor strategies and smart beta indices, applying techniques of signal processing and machine learning on portfolio construction, and building the database for production. Working as a summer intern in the Financial Risk Management team at KPMG Hong Kong, he helped build models to forecast important ratios for banks and gained an understanding of how risk affects the finance industry and how it is regulated. Zhihao has passed CFA Level I and has earned a machine learning engineer nanodegree on Udacity. He is a team player and loves to tackle challenges. In his spare time, Zhihao enjoys detective novels, anime, badminton, and swimming.
Sadler, Alex 	Alex Sadler graduated from Northeastern University with a bachelor's degree in mathematics and business and a minor in data analytics. While at Northeastern, Alex completed three extended internships in the financial sector at Wellington Management, Morgan Stanley, and most recently at Grantham, Mayo, Van Otterloo & Co. (GMO). During his 10 month internship at GMO in their quantitative asset allocation division, he led the creation of a new framework for systematically forecasting REITS in MATLAB using statistical and machine learning techniques based on fundamental and economic data. He also worked on other projects such as improving the efficacy of real carry forecasts, creating index proxies for internal use, and migrating manual, Excel-based models into production code. At Morgan Stanley, Alex worked within the prime brokerage division where he helped produce research reports for clients based on data analytics of the hedge fund industry. Leading up to the MFE, Alex worked on strengthening his quantitative background through online classes and textbooks in machine learning, deep learning, derivatives, linear algebra, and analysis. In his spare time, Alex enjoys traveling/backpacking, golfing, and snowboarding.

Sagar, Sarthak 	Sarthak Sagar received his bachelor's degree in electrical engineering from Indian Institute of Technology Kanpur and MBA from Indian Institute of Management Ahmedabad. During his MBA, Sarthak developed a solid foundation in diverse financial markets with a focus on courses in equities, fixed income, derivatives, credit risk, asset backed securities, hedge funds and alternative investments. Sarthak interned at FinIQ Consulting and accepted a pre-placement offer from there. At FinIQ Consulting he implemented stochastic volatility models, Dupire local volatility model and Heston stochastic local volatility model for pricing equity & FX structured products and exotic options. He built greek calculators, arbitrage-free volatility surf interpolators, bulk pricers, finite difference solvers, excel (VBA) prototypes, and used concepts of stochastic calculus (reflection principle, Brownian bridges) in software solutions. He led the end-to-end development of FX mark-to-market blotter web applications employing pricing and Greek calculation of exotic FX products, and feature development and design for portfolio & collateral modules. He was responsible for a team of 9 and managed 7 quant MBA interns and prepared training modules in quantitative finance used for employees & new hires. He also led the initiative of fixed income derivative pricing at FinIQ and valuing callable securities employing the Longstaff-Schwartz Algorithm. During his graduate studies Sarthak undertook industrial projects on benchmarking Indian commodity exchanges vis-à-vis prominent global exchanges (ICE, CME, LME, SHFE), and macroeconomic stress testing of FX derivatives. Before his MBA, Sarthak worked at Qualcomm with global teams from Austin, San Diego, and Paris for 2 years. In preparation for joining the Berkeley MFE Program, he acquired the Udacity Machine Learning Engineer Nanodegree and Deep Learning Specialization, enhancing his proficiency in Python and Machine Learning. Sarthak has cleared the CFA level II exam and plans to take the level III exam soon. In his free time Sarthak enjoys playing cricket, foosball, long term strategy games and watching mystery/thriller genre movies.
Samdani, Shrey 	Shrey Samdani graduated from the University of California, Berkeley with a bachelor's degree in computer science and statistics. Prior to joining the Berkeley MFE program, he worked as a Backend Engineer at Hive, where he was in charge of statistics for their data labeling and prediction platforms. This included writing Spark jobs and Node CronJobs to aggregate data from multiple databases and integrate them with the backend. Shortly before working at Hive, Shrey was an intern at Nand Capital, writing MapReduce programs in C++ to combine large amounts of financial data and using statistical methods to find patterns and trends. As an undergraduate student, Shrey completed an internship at Bridgewater Associates as an Investment Engineer. There, he worked on implementing diagnostics for a system that generated currency hedges on international investments. These diagnostics were used to audit and verify large trades. Additionally, through his studies, Shrey acquired extensive knowledge in topics of statistical and machine learning, using programming languages such as Python and R to analyze data and build corresponding models. In his spare time, Shrey enjoys Bollywood dance (learning and competing) and indoor bouldering / rock climbing.

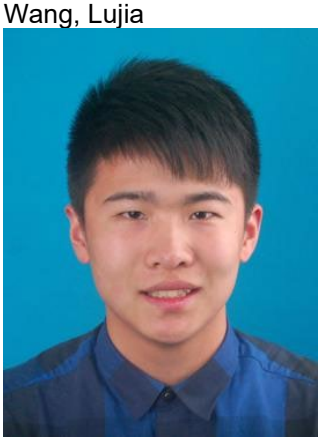
Shah, Jill 	Jill Shah received his dual master's and bachelor's degrees in mathematics and electrical-electronics engineering from BITS Pilani. During his time at BITS, Jill interned with Credit Suisse in their Market Risk Management division. At the end of his internship, Credit Suisse offered him a full-time offer where he worked for another 2 years. In 2017, Jill joined a high-frequency trading firm where he researched and developed ultra-low latency market-making algorithms for the Indian equity market using C++ and Python. The algorithm traded more than 500 stocks simultaneously each with a holding period less than a few milliseconds and ended up being one of the most profitable equities strategies for the firm. Before joining the Berkeley MFE program, Jill worked as a quantitative researcher with IDFC Asset Management. Here he was part of the fund management team which managed various funds under the alternative investment division. He was predominantly involved in the management of Neo Equity PMS where he worked on building a multi-factor model using Machine Learning techniques in Python. Neo Equity--the only AI-driven PMS on the mainstream Asset Management Platform in India--outperformed its benchmark index by 9% in the 12 months after Jill joined the team. His firm awarded him the 'Star of the Quarter' award for his contributions to the fund. Jill passed the CFA Level II exam in 2017. In his spare time, he likes to trek and play cricket. He is also an avid gamer and likes to play strategy and first-person shooter games.
Shetty, Prarthana 	Prarthana Shetty obtained her bachelor's degree in computer science and engineering with a specialisation in data science and a minor in management studies with distinction from PES University . She was also the recipient of the CNR Rao Scholarship, awarded to the top performers in the Computer Science Department. In addition, she attended the Financial Risk Management summer school program at the London School of Economics, has completed Level I of the FRM and is a CFA Level III Candidate. Prarthana has a wide range of experience ranging from advanced quantitative analytics to devising investment strategy solutions for institutional clients. She worked as a Quantitative Analyst in the Treasury Department of State Street Corporation for 2 years where she collaborated on a broad range of projects including "Dynamic Deposit Forecasting based on Macroeconomic factors", "Optimal Interest-Rate Beta Estimation", "Term Structure Modelling" and "Client Attrition Modelling". Prarthana developed deep domain expertise in Statistical and Machine Learning models to generate insights from large financial data sets using Python and R. She is also skilled in breaking down complex, technical topics and communicating them effectively to clients. With this unique skill set, she moved to a front-office Investment Strategy & Research Analyst role at State Street Global Advisors where she worked on devising Multi-Asset Class Investment Portfolio solutions for Institutional Clients. Her research projects during this role included: Measuring Climate Risk Resilience of Portfolios, A Case for Multi-Factor Investment Strategies and Long Term Allocation to Emerging Markets (Debt & Equity). In order to bridge the knowledge gap that exists in the domain of finance, she launched an education platform called "Coffee Time Finance", with a mission of demystifying financial concepts to readers from across all educational backgrounds. The platform currently has a readership base of 3000 subscribers. Prarthana is also an artist and hopes to showcase her artwork in galleries across the globe. She enjoys reading books on Psychology and Philosophy, has been professionally trained in 5 dance forms, has a flair for public speaking and was the President of the State Street Toastmasters club.

Shi, Kefan 	Kefan Shi graduated from Nanjing University with a bachelor's degree in financial engineering where she developed a solid foundation in finance and math. Kefan also gained skills in programming and has expertise in Python and C++. Prior to joining the Berkeley MFE program, she completed several projects in CNN, LSTM and GAN. During her most recent internship with a hedge fund, she adopted technical indicators, buy/sell imbalance and pattern recognition to produce mid-frequency factors. Using the XGBoost model, she adopted CNN with customized channels to mine stock factors. She also interned at a mutual fund, where she ascribed the return over fundamental factors based on the Brinson Model and constructed a fund manager performance evaluation system. In addition, she designed a GAN algorithm to generate more robust trading signals from top fund managers' actions and macroeconomic data. Her prior internship at GF Securities involved developing a strategy based on various performance data. She searched optimal hyper parameters and industry rotation by taking into consideration correlation coefficients between net money flow and returns of individual industry indexes. In her spare time, she enjoys solving sudoku and watching movies.
Silantyev, Dmitry 	Dmitry holds a master's degree in quantitative finance from Bocconi University and a bachelor's degree in economics from MGIMO in Moscow. He also spent a summer term at Harvard University, studying mathematics. Before deciding to pursue graduate studies, Dmitry managed a securitized derivatives book at Renaissance Capital, an EM-dedicated investment bank. In that role, he also developed a target-volatility systematic investment strategy and introduced an FVA management routine that helped optimize the firm's collateral profile. Dmitry started his career in cross-asset derivatives sales at Goldman Sachs, where he launched two new interest rate products aimed at the local market and designed to minimize CVA charges. He also worked on several thematic indices, which included both factor- and sector-based rebalancing strategies. Most recently, Dmitry interned in Quantitative Research at Rationis in partial fulfillment of the requirements for his Master's degree at Bocconi. There, he implemented and deployed a proprietary fundamental factor model for long-term bond returns in R. Dmitry began his journey into the data science world by passing the Applied Data Science Module at WorldQuant University with honors. In October 2020, he won the Citadel Europe Regional Datathon, a week-long competition with 500+ applicants from Europe's top universities, by applying clustering methods to identify New York neighborhoods undergoing gentrification. Dmitry is a Chartered Financial Analyst (CFA) and holds a Certificate in Quantitative Finance (CQF) with distinction.
Singh, Jorawar (Part-Time) 	Jorawar Singh is currently working in the Multi-Asset (MA) Investment risk team at T. Rowe Price. Previously he worked at MSCI for 8 years, most recently as an Analytics Consultant. At MSCI, Jorawar was in a role where he helped clients with custom analysis, questions, and implementations using various MSCI risk models. He has extensive knowledge about risk models and in framing portfolio and risk problems in a way conducive to solving them with risk & quantitative models. His 11 years of industry experience also includes positions with Avendus Capital Private Limited and Credit Suisse before joining MSCI. He earned a Bachelor and Master of Technology in Civil Engineering from the Indian Institute of Technology and is a CFA charterholder. Jorawar has extensive experience in delivering risk and multi-factor performance attribution solutions to institutional clients.

Singhal, Juhi 	Juhi graduated from the National Institute of Technology, Allahabad with a bachelor's degree in information technology. During her studies she was an active member of the college's athletics and dance team as well as a core team member at the training and placement department. On graduating, she joined Goldman Sachs in the Corporate Treasury Division during which she built various optimization models. One of these aimed to minimize funding costs for the desk by charging based on incremental interest rates replacing the legacy weighted average cost of capital for constructing portfolios. She single handedly worked on fund planning and organization which resulted in the reduction of interest expense incurred by the firm. After three years, she joined the Global Markets Division as an Associate in the High Touch Equities Strat team. She led the Reporting and Analytics team and worked on efficient allocation of unattributed P&L by enhancing trade matching algorithms. She also built a robust system for capturing average price stop trades and systematically calculating P&L. In addition, she created pipelines for large scale trade data to support the platform that matches client metrics and P&L. During her time at Goldman she was actively involved in cross divisional team activities and fireside chats with firm leadership. She has also passed the CFA level 2 exam. Apart from her passion for finance, Juhi also enjoys dancing and playing violin and badminton.
Spalding, Phillip 	Phil graduated from University of California, Santa Cruz with a bachelor’s in business management economics where he developed a strong background in finance. He is a CFA Charterholder and Certified Public Accountant (California), and joins the UC Berkeley MFE program with over 6 years of experience in financial services. Phil began his career in public accounting at Deloitte, where he worked with a number of prominent hedge funds, venture funds, and private equity funds. He quickly moved to the M&A Advisory’s data analytics practice, becoming the third member of the small West Coast team where he honed his data science skill set, learning Python, SQL, JavaScript, HTML, Tableau, and Alteryx. Phil developed many dashboards and tools that have fueled the practice’s growth, including an NLP machine learning application, using deep learning models, for a Deloitte application and a Tableau extension that helped to modernize data analytics deliverables. He quickly became one of the group’s leaders, crafting strategy, helping to expand the group’s client base, more than tripling the size of the data analytics team, and training many of the group’s current managers and senior consultants. As the practice grew, so did revenues, increasing from $1M when he joined to over $8M in 2020. Phil is committed to lifelong learning. Throughout his career at Deloitte, he has continually taken math, statistics, and programming courses, culminating in his enrollment in the MFE program. He especially enjoys machine learning and loves projects where he can apply ML techniques to financial applications. While not working, Phil enjoys cooking, golf, and hanging out with his family, friends, and dog, Bear.
Talreja, Neerja Jagdish 	Neerja Talreja graduated from VESIT, University of Mumbai, with a bachelor's degree in computer engineering. As a student she had the opportunity to work with a small startup and research annual reports of companies listed on the Nifty and also learn about the business models and sectors that drove these companies. Neerja went on to create a financial analysis tool using machine learning as part of her final year project which was aimed at combining fundamental, technical and sentiment analysis to give unified investment advice to novice investors. Neerja later interned at a foundation in Mumbai that provides skill development for students in municipal schools. She worked towards building an investment plan that could help sustain and grow the foundation in the long term and as well as helping streamline organisational processes. Neerja has completed various online courses involving machine learning, econometrics, macroeconomics and statistics and has passed both CFA level 1 and FRM P1. She enjoys reading about politics and history. She is also fond of English Literature, Jungian Psychology and Indian Mythology.

Tong, Yifei 	Yifei Tong graduated from Washington University in St. Louis in May 2020, where he received a BSc in computer science with a second major in financial engineering. During his undergraduate studies, he completed two internships with Tencent and Handled. At Handled, Yifei worked as a data science and machine learning intern where his responsibilities included feature engineering and building machine learning models on corporate and customer data in order to provide business insights for the management and operation teams. Yifei worked as a front-end engineering intern at Tencent where he gained practical experience of collaborating with others on software engineering projects in a team setting. As part of his college extra-curricular activities, Yifei worked at the Humanities Digital Workshop assisting natural language processing projects such as topic modeling of 19th-century novels and part-of-speech tagger for Latin literature. Before joining the Berkeley MFE program, he worked as a machine learning engineer for a startup (Boonoob), developing spam detection systems using machine learning techniques. He also earned the deep learning specialization certificate through Coursera and the Machine Learning Engineer nanodegree with Udacity. For the Udacity capstone project, Yifei trained an LSTM regressor that predicts stock movement based on news sentiment. In his leisure time, Yifei enjoys watching movies and TV shows, exercising, basketball, as well as cooking.
Toyber Bravo, Daniela del Carmen 	Daniela received her bachelor's degree in actuarial science from Instituto Tecnológico Autonómo de México focusing primarily on econometrics, financial mathematics and portfolio optimization methods. Her thesis focused on incorporating credit risk into the optimization process of an international reserves portfolio. Prior to joining the Berkeley MFE, Daniela spent five years with the Central Bank of Mexico, initially as an investment strategist working on the strategic asset allocation process for the international reserves portfolio (USD 190 billion). She helped fine-tune the diversification process by shifting the objective function of the optimization model to conditional value at risk (CVaR) minimization. Her analysis also contributed to the inclusion of new asset classes to the portfolio. Her work also focused on increasing the quality of the asset allocation inputs by incorporating forward-looking data into asset returns and improving asset correlation modeling. In 2019, her team received an award for Reserve Manager of the Year from Central Banking Publications, for its innovation in central bank strategic asset allocation. Later that year, she moved to the USD fixed income desk, where she traded bonds, futures and money market instruments, as well as actively managing and developing strategies for the fixed income portfolio of the international reserves. During her free time, Daniela enjoys travelling, outdoor activities, trying new dessert recipes and spending time with her dog.
Tripathi, Rachit 	Rachit Tripathi earned a master's degree in business analytics jointly offered through IIM Calcutta, IIT Kharagpur and ISI Kolkata as well as a bachelor's degree in mechanical engineering from IIT Kanpur. He spent three years in HSBC's global banking and markets division as a member of the fixed income quant team where he was involved in developing model performance monitoring scripts for structured rates models using Python. These included a spread option pricer (MultiSABR), multiple underlying black scholes (MUBS), inflation curve construction and cheapest to deliver (CTD). Using in-house algorithms and the implementation of gaussian process regression (GPR), he developed a machine learning model to reduce the VaR computation cost and computation time by 80%. This model predicts VAR with less than 0.1 percent error. Prior to joining HSBC, he interned with Quantcube technology as a data scientist working on image segmentation problems for satellite images of the earth. Rachit enjoys working on data science challenges and his team finished 1st in India and 13th globally in Data Science Games 2016. He also won a bronze medal in the Kaggle competition hosted by NOAA. Rachit has passed the CFA level 1 exam and in his leisure time he enjoys playing chess and poker. He is also a seasoned traveller.

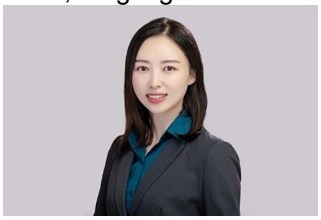
Tsai, Meng-Hsuan 	Meng-Hsuan graduated from National Cheng Kung University in Taiwan with a degree in electrical engineering. Her graduation project research used LSTM networks, XGBoost, and SVR to predict stock price trends based on price history alongside technical and chip analysis indicators. She led a team that won a gold medal in the International Genetically Engineered Machine Competition in Boston for their work creating an innovative diabetes monitoring system. In light of her efforts, she was awarded the We Tech Qualcomm Global Scholars Award. Meng-Hsuan worked at Goldman Sachs Taipei as a senior analyst where she led teams of business intelligence specialists on projects for Asian markets. She defined automation plans and created new dashboards to forecast optimal ranges for targeted client profiles. She also generated business intelligence strategies adopted by the top six banks in Asia and aggregated time savings among Asian markets. Meng-Hsuan also covered regional training webinars of APAC teams and presented seminars on Alteryx, Python and SQL for more than 500 employees as part of the interdepartmental training programs. She has a strong interest in developing educational open-source communities and enjoys scuba diving.
Verma, Akash 	Akash Verma received his bachelor's degree in chemical engineering from the Indian Institute of Technology, Bombay. After graduating, he joined the Trade Analysis team at Credit Suisse where he worked exclusively with traders to price derivative products (IR/FX swaps, swaptions, volatility products) to calculate exposure and put on specific hedges to manage risk. Before joining the Berkeley MFE program, he worked at Kristal.AI, a Singapore-based asset management firm with AUM of 200M+ where he built a new trading algorithm using options/futures. He also worked extensively on a ML-based robo-advisory model for portfolio construction & optimization in Python that leveraged clustering, bootstrapping, and genetic algorithms to advise on asset allocation. This model is currently being used by 10,000+ investors on the Kristal.AI platform. Akash holds CFA Level 1 certification and is also licensed for capital markets & financial advisory services in Singapore. With over 5 years of experience in statistical modelling, derivatives trading, quantitative model development, and portfolio management, he has a solid foundation to build a promising career in quantitative finance. In his spare time, he enjoys exploring different strategy games such as Catan and Agricola as well as playing chess and tennis.
Voyage, Anthony 	Anthony Voyage attended the University of Melbourne where he received a Bachelor of Commerce with honours majoring in finance and a Master of Mechanical Engineering, graduating with distinction. During his masters, Anthony also undertook a year-long exchange to Imperial College London, where his capstone research project achieved first class honours. Anthony's curriculum and project work developed solid foundations in stochastic calculus, statistics, numerical methods, and optimisation and control techniques and machine learning, utilising programming in MATLAB, Python, and C amongst other languages. This has been supplemented with several online courses in his spare time focusing on coding and machine learning. Whilst completing his Masters degree Anthony worked as a teacher's assistant, tutor and head tutor for the finance department at the University of Melbourne. Prior to joining the MFE Anthony worked as a wireline engineer for Schlumberger Technology Corp in the UAE, USA and Australia, responsible for managing teams and project delivery for clients, as well as identifying opportunities for service improvement. Anthony was quickly promoted to Senior Field Engineer in his time with Schlumberger. He had also started a joint PhD in fluid dynamics and combustion at University of Melbourne and University of Aachen, using high performance computing hi-fidelity data with machine learning techniques to better model flame surface dynamics. In his spare time Anthony enjoys playing soccer, going to the gym, listening to music, politics and current affairs and reading bad sci-fi.

Wang, Gerui 	Gerui graduated from the University of Waterloo with distinction and earned his bachelor's degree of mathematics in actuarial science with a finance option. His interest in finance and statistics led him to intern at different financial institutions. His work experience mainly consists of developing and implementing complex mathematical and statistical models and analyzing large data sets. While working as an actuarial analyst at New York Life, his main responsibility was maintaining and running different valuation models for the purpose of reserve estimation and financial liability. Gerui effectively developed Python algorithms to generate Monte Carlo simulations for investment returns of a portfolio of variable universal life and understand the risk exposure. Gerui also completed an internship within the capital management team at Manulife, where he built and enhanced models using SQL and SAS to calculate required capital and analyze the trend. Furthermore, he conducted sensitivity research to provide a holistic view of how the required capital responds to different factors. In his spare time, Gerui enjoys a variety of board games, hiking, and musicals. Gerui has also volunteered as a peer counsellor during his undergraduate studies.
Wang, Lujia 	Lujia Wang graduated from Shandong University with a bachelor's degree in finance. He has also taken online courses from Coursera and Udacity in Machine Learning, Deep Learning and NLP. During his internship at AXA Climate, Lujia constructed statistical models on climatic risk using temperature, precipitation, solar radiation and wind speed to price parametric insurance products based on a meteorological index. He also analyzed satellite images by R to price agricultural insurance products based on vegetation indices and used machine learning models on large data to analyze industrial risk. Additionally, his previous experience as a sales and trading intern at BNP Paribas provided a solid foundation in derivatives. His remit included deal initiation for structured products, including swaps and other exotic options, and facilitating quanto swap projects to help FI clients hedge structured deposit exposure by option quote and term sheet preparation. In his spare time, he enjoys soccer, basketball and movies.
Wang, Shuyu 	Shuyu earned a bachelor’s degree in economics with a major in financial engineering from Wuhan University. Throughout her studies, Shuyu gained a solid foundation in finance,mathematics, statistics, and programming. Her past projects include conducting real-time micro-blog trending topic prediction with Random Forest model. Before attending the MFE program, Shuyu interned at a hedge fund in Shanghai where she focused on developing trading strategies of digital currency assets based on statistical arbitrage. At Huatai-PineBridge Investments, she was responsible for researching the performance of indices and ETFs with macroeconomic indicators. At China International Capital Corporation she constructed a pricing model for China’s convertible bonds and conducted return-based style analysis of convertible bond funds. She also applied machine learning tools to predict the default risk of bonds using public sentiment data. In her spare time, Shuyu enjoys Chinese painting and playing piano.

Wang, Tingjun 	Tingjun Wang earned a master's degree in quantitative finance at the National University of Singapore, where he studied derivatives pricing, stochastic calculus as well as machine learning. While pursuing his degree, Tingjun completed four internships in the financial sector. During his most recent internship at Derivatives China Capital, he assisted the option group to perform speed measurements of its trading framework and used Cython language to optimize its performance. Under the direction of the portfolio manager, he worked on developing intraday volatility trading strategies, which sparked a real passion for systematic trading and volatility strategies. Earlier, at another Chinese quant fund, he used deep learning models such as CNN-LSTM to forecast high-frequency futures data series, motivating the team to do further analysis. He also interned at Analytic Development Group in S&P Global Market Intelligence. As a quantitative modeler, he focuseding on detecting credit default events and helped his team construct models and summarize patterns to explain defaults as well as sentiment scores of issued reports. In his spare time, Tingjun enjoys reading history books and watching football; he also likes solving questions in Leetcode and Project Euler.
Wang, Yulang (Part-Time) 	Yulang Wang obtained his bachelor's in economics and computer science from Claremont McKenna College and Harvey Mudd College in southern California, where he developed his passion for quantitative finance and machine learning. Working with Professor Darren Filson, he replicated several factor investing papers related to momentum, value, and "quality." In his senior capstone project, he designed and implemented a clustering model to detect malicious botnets from DNS server logs. After graduation, he joined Microsoft first as a software engineer in Azure, where he led three major projects and built several core microservices that enabled large-scale telemetry ingestion from IoT devices. Afterwards, he transitioned to an applied scientist role working on automated machine learning and natural language processing. His recent work includes productionizing Auto-ARIMA and designing an automated hyper-parameter selection algorithm for LSTM on time-series forecasting problems, handling imbalanced data in automated classification and regression pipelines, and leveraging text embeddings from latest NLP models such as BERT and GPT-3 to extract information from unstructured data. Through the MFE program, Yulang hopes to apply his software engineering and machine learning skills in the field of quantitative finance. In his spare time, Yulang enjoys golfing, car/kart racing, and latte art pouring.
Wang, Zhenyu 	Zhenyu obtained a bachelor's degree in engineering from the Automation Department at Tsinghua University, providing him with a solid programming background. Working as a product manager in IT companies for 2 years, Zhenyu became intrigued by the financial world, leading him to pass CFA level I and II exams in the top 10%. As a Research Assistant in PBC School of Finance at Tsinghua, he constructed multiple anomalies in the verification of single factor models using SAS, and created a model to match mutual funds from different databases in Python, greatly enhancing the processing efficiency. Driven by his passion to create his own models, he used Python and C++ to construct various models in Kaggle data science competitions, including neural networks, support vector classifier, and time series prediction models. In Kaggle, Zhenyu learned systematic methods to construct mathematical frameworks, such as data cleansing, principal component analysis, cross validation, and grid search parameter tuning. To sharpen his skills, he completed multiple online courses and specifications on Coursera and NetMath by UIUC, such as PDE, stochastic processes, complex analysis, programming algorithms, etc. In his spare time, Zhenyu loves running, cycling and photography. He has been running marathons since 2014 with a personal best of 3:44:55. Recently, Zhenyu has been enjoying the benefits of meditation.

Wang, Zizhao 	Zizhao Wang graduated from the National University of Singapore with a bachelor's degree in quantitative finance and a second major in statistics, gaining a solid foundation in financial modeling, data science and time series analysis. His honors project focused on building a neural network model to select stocks with positive alpha and construct trading strategies. Driven by his keen interest in quantitative research and investment strategies, Zizhao has also completed a capstone project in factor investing with Dr. Skorodumov at Morgan Stanley. Prior to joining the Berkeley MFE Program, Zizhao spent over two years working as a quantitative risk analyst at United Overseas Bank in Singapore, where he developed and backtested credit risk models for stress-testing purposes. He analyzed Bloomberg data to estimate the asset correlations of listed companies in 19 countries. He also scripted SAS and MATLAB programs to build econometric models, conduct Monte Carlo simulations and estimate value at risk of bank's retail and wholesale portfolios. To enhance his knowledge in quantitative trading and machine learning, Zizhao has completed independent coursework in 'AI for Trading' by Wordquant, 'Natural Language Processing' by Amazon alexa and IBM Watson and 'Deep Learning Specialization' by Deeplearning.ai hosted by Udacity and Coursera. He has also passed the CFA Level II and the FRM part II exams. In his spare time, Zizhao enjoys traveling and watching movies.
Wu, Kaixi 	Kaixi obtained her bachelor's degree in statistics from Sun Yat-Sen University where she developed a solid foundation in mathematics, statistics and programming. She also took courses in machine learning, corporate finance and econometrics through Coursera. To gain first hand experience in the financial industry, Kaixi interned in the wealth management division of Orient Securities where she used Panda and Numpy to analyze financial data. At Qilin Capital, a Shanghai-based hedge fund, she initiated a daily frequency alpha stock selection strategy with information ratio greater than 0.2 using volume and price data. At Huatai Securities, Kaixi built a neural network structure of DCGAN using Pytorch to generate monthly return series of S&P500 and adjusted the network structure to help improve performance. In her spare time, Kaixi enjoys playing tennis, listening to pop music and playing bridge.
Wu, Wenzhao 	Wenzhao graduated from the University of Waterloo with a bachelor's degree in actuarial science and statistics and a master's degree of mathematics in statistics. Wenzhao is passionate about quantitative investing and machine learning. In her master's research work, she focused on applying reinforcement learning framework with deep neural networks for portfolio management. Before joining the Berkeley MFE program, she completed several internships in the quantitative investing field. While working at the quantitative strategies and risk premia group at Canadian Pension Plan Investment Board (CPPIB), she participated in developing and implementing a new currency value factor to help capture trading signals and calculate trading positions using Python. She also contributed to portfolio construction and backtesting trading strategies including calculation of P&L and risk analysis. During a further internship in the quantitative research team of CPPIB she supported research infrastructure to better control and monitor different modeling components and helped to develop an enhanced factor model. At OPTrust Portfolio Construction Group, she conducted quantitative research on portfolio construction and asset allocation. She researched industry and academic papers to build economic indicators to monitor portfolio risk and develop profitable investment strategies. In her spare time, Wenzhao enjoys reading, traveling and photography.

Wuebker, Richard 	Richard was born and raised in Ohio and attended Ohio State University as an undergrad. He obtained a Master of Financial Mathematics from the University of Dayton. It was there that he obtained a great theoretical foundation of option pricing which helped to start his career and obtain a position on an OTC derivatives trading desk in Chicago. Richard is extremely passionate about asset pricing and using Statistics and ML to discover signals in the markets. He has worked on both the buy and sell side on trading desks and found them both to be very challenging and rewarding. In the past he has traded commodities and equities but would love to learn more about fixed income portfolios and how to engineer alpha in that space. During his time in San Francisco Richard enjoyed learning more about software engineering and start-up culture. It was here that he worked for a small quantitative equity trading firm which introduced him to the buy side of finance, an area that he would love to skill up for and explore. For the past few years, he has been an engineer for a very large tech consulting firm, and although engineering is an extremely fun and rewarding profession, he misses the challenges and camaraderie of working with the markets and hopes that the MFE program will open up more exciting roles. Richard is a huge college football fan among other sports. Since leaving Columbus, Ohio, he has enjoyed living in multiple cities including New Orleans, Chicago and San Francisco. He is also very grateful to have had the chance to teach English in Japan for a year after his undergraduate degree. Although his Japanese is limited, he still loves to try to speak it when he can.
Xu, Minxun 	Minxun graduated from UC San Diego with a bachelor's degree in mathematics & computer science where he completed in-depth courses in math, programming and machine learning. He has also passed the CFA level 2 exam. During his internship in the quant team at DH Fund Management, Minxun became proficient in the parameters of alpha strategies by helping develop and maintain analyst-consensus factors used in real scenarios. He also worked on a commodity quantamental strategy based on high-frequency data. Furthermore, Minxun established an index prediction model that used DNN to predict daily trading signals and then filtered signals by macro and risk factors which achieved a 2.5 Sharpe ratio. Minxun is also very interested in the field of machine learning and during his internship at Huawei and EY, he utilized a ML model to solve issues in credit default rate and off-network users rate predictions. In his spare time, Minxun enjoys playing poker and hiking.
Xu, Zhuoyuan (Helen) 	Zhuoyuan (Helen) received her bachelor's degree with a double major in statistics and economics (minors in mathematics and applied mathematics) from the University of Washington. After graduation, she joined Parametric Portfolio Associates in Seattle as a Research Intern, where she worked directly with the global head of research and senior researchers and gained fundamental knowledge about factor-based investing. During her internship, Helen wrote R code and SQL queries to retrieve fundamental data from QA Direct, boosting the efficiency of the research team. In addition, she prototyped an industry-specific value factor for Parametric and performed a backtest on its alpha-generating ability. Helen also interned at Deloitte's Risk Advisory team and Dell's Marketing team, and worked part-time as a Teaching Assistant for UW's Statistical Reasoning & Software courses. Before joining the Berkeley MFE program, she participated in Cornell's Investment Portfolio Case Competition, in which she simulated different glide paths and designed an effective asset allocation strategy for a target-date retirement planning fund, generating 6.42% sustainable annual returns. Helen was chosen to lead a team of four people in Citadel's Data Open Competition in 2020. Helen has passed the CFA level I exam, completed multiple MOOCs in machine learning, and is passionate about applying ML techniques to the finance sector. In a capstone project, she built a hybrid ARIMA & Boosted Tree model to capture both linear and nonlinear patterns of stock return data. She also wrote her version of a cross-validation algorithm to avoid cross-sectional leakage and look-ahead bias. Curious about the H-1B visa selection process, Helen analyzed the Labor Condition Application dataset by resampling and fitting logistic regression. In her spare time, she enjoys playing Rummikub, brewing coffee, and painting.

Yang, Luhua “Joseph” 	Joe graduated from the National University of Singapore with a bachelor’s degree in computer engineering during which time he completed three software engineering internships which helped sharpen his technical acumen in programming, machine learning, data analytics, and system design. These included Apple where he worked as a full-stack software engineer and designed and developed the home web portal “iPAC” for the Apple APAC Region which is used by over 1000 employees. Upon graduation, he joined Ant Group, one of the biggest unicorns in fintech, in the forex trading team as an ML algorithm engineer. There, Joe was involved in the company’s process to innovate next-generation data-driven forex trading and liquidity management tools to manage Alipay’s $30 billion currency exposure. Joe developed forecasting models in Python using different deep learning neural networks, such as Seq2Seq and Transformer, to forecast the daily trading volume of several business lines. He was also involved in the company's forex trading strategy designs. He researched and designed a multiple-factor model to predict USD/CNH price movement, and used a model-free reinforcement framework Q-learning to automate forex trading in less risky scenarios. After discovering his passion for quantitative trading, Joe spent time researching and designing equity trading strategies on interactivebrokers.com, where he applied Quantopian tools such as Zipline and Alphalens to calibrate and backtest his strategies. In his personal time, Joe plays guitar and has participated in multiple onstage performances. He also enjoys hiking and cycling.
Zhang, Aojun 	Aojun Zhang graduated from the National University of Singapore with highest distinction in quantitative finance and a second major in statistics. His undergraduate dissertation topic was on Risk Parity Portfolios with Generalized Risk Measures. After graduation, he joined NUS Business School as a research assistant and participated in several projects with support and grants sponsored by the government. His research focused on leveraging data analysis and econometric modeling. He then enrolled in the Master of Science in Business Analytics (MSBA) program at NUS and graduated in 2020 with a specialization in big data analytics and consumer data analytics. Since 2019 he has been working as a data scientist at AXA where his main responsibilities include linking business needs to analytical solutions and building data strategic assets for the business.He has led and participated in several projects with exposure to end-to-end analytical solutions involving data engineering, machine learning (or deep learning) and AWS cloud computing. Aojun is a certified FRM and has passed CFA level II. His interests include asset pricing and valuation of derivative securities, the intersection of machine learning and quantitative finance and portfolio construction and optimization. In his spare time, Aojun likes playing sports, traveling, reading books and learning from others through joining data science talks or conferences.
Zhou, Tingting 	Tingting Zhou holds a bachelor’s degree of finance and a master’s degree of international finance from Nankai University; she also spent nine months studying financial engineering at UCLA. Before joining the MFE program, Tingting worked as a fixed income portfolio manager at Zhongtai Securities Asset Management, where she focused on portfolio construction, developing strategies and performance evaluation for credits, ABS, stock pledges and loans; she and her team were responsible for over $11BN AUM. As a multi-asset growth strategy summer intern of DoubleLine Capital, Tingting constructed various optimization-targeted index portfolios by applying dynamic Regime Shift strategies using HMM with R. She also worked on a COVID case predictor using Kalman Filter and machine learning algorithms via Python to help the team make investment adjustments. During an industry project with Citi, Tingting priced Bermudan style fixed income derivatives using Neural Nets via PyTorch, in which she implemented NN, XGBoost and optimization algorithms to price American swaptions and calibrate market data. Tingting has also completed coursework in Python programming, deep learning and machine learning. Upon completion of the Berkeley MFE, Tingting aims to use her skills in trading and multi-asset management. In her spare time, she likes skateboarding, aerial dancing and aerial yoga

Zhou, Yusong 	Yusong graduated with bachelor's degrees in applied mathematics and economics from Wuhan University and has a solid background in theoretical economics and mathematical reasoning, together with extensive objective-oriented programming experience in Python and C-family. During his first internship, Yusong worked as a quantitative researcher at a startup hedge fund, focusing on trading strategies in the futures market. He helped enrich the time-series feature pool and introduced his own cross-sectional strategies which diversified the existing portfolio. He also worked as a quantitative developer, and independently established multi-variety back-test framework and risk control modules. Yusong also worked as an intern in the trading & strats department of a blockchain company, where he focused on the modeling of a quanto arbitrage strategy, a unique contract involving three currencies. He revised the prototype, remodeled the classical two-currency quanto arbitrage equilibrium, and applied advanced statistical tools to model volatility. He once used machine learning techniques to predict highly imbalanced patterns of bar data using tick-level features which improved the anti-risk performance of certain strategies. He also analyzed the cryptocurrency ecosystem, from blockchain basics to emerging DeFi projects. During his internship at Amber Group, Yusong investigated the decentralized exchanges and applied economic tools to analyze the equilibrium and possible gains/losses. In his spare time, Yusong enjoys outdoor activities such as hiking and photography, and has played table tennis for over 10 years.
Zhou, Zhiling 	Zhiling received his bachelor's degree in finance from Wuhan University where the curriculum included in-depth courses in mathematics, programming, statistics and finance. He has both sell-side and buy-side experience, mainly in the field of quantitative finance. His most recent position was as a derivatives trading desk intern at China International Capital Corporation (CICC). There, he provided daily support for the options traders and automated daily booking and calculation procedures via programming. At FM First China fund, Zhiling served as a quantitative research intern looking at exceeding expectation factors. During his internship at K.N. Capital, Zhiling gained experience in financial machine learning. He developed a hybrid ensemble learning multi-factor strategy using Meta-Labeling. In addition, while interning with Futu Network Technology, Zhiling developed a K-line pattern detection algorithm as well as conducting research in deep learning stock selection and pairs trading strategies. Zhiling has passed all ACCA exams as well as CFA Level I. In his spare time, he enjoys working out in the gym, playing basketball and traveling.