Hen Sc

Visual Brand Book

Brand Promise.

Prediction ROI Trust Speed to Operationalize



OUR MISSION:

WE'RE USING BETTER MATH TO HELP HEALTHCARE COMPANIES SAVE COST & LIVES

OUR VISION: TO MAKE HEALTHCARE MORE PREDICTIVE, PRESCRIPTIVE, & PROACTIVE WITH MACHINE LEARNING

Let's Talk Color.

R:232 G:14 B:138	R:168 G:50 B:146
C:2 M:99 Y:2 K:0	C:37 M:94 Y:0 K:0
#:E7168A	#:A83292
R:99 G:42 B:120	R:68 G:34 B:89
C:74 M:100 Y:18 K:6	C:83 M:99 Y:33 K:27
#:632A78	#:442259
R:22 G:35 B:77	R:59 G:59 B:60
C:100 M:92 Y:39 K:39	C:69 M:62 Y:60 K:51
#:16234D	#:3B3B3C
R:212 G:123 B:177	R:153 G:82 B:149
C:14 M:63 Y:1 K:0	C:45 M:81 Y:8 K:0
#:D47BB1	#:995295
R:73 G:193 B:194	R:110 G:193 B:232
C:64 M:0 Y:28 K:0	C:52 M:7 Y:2 K:0
#:49C1C2	#:6EC1E8
R:74 G:104 B:176	R:42 G:51 B:130
C:78 M:62 Y:0 K:0	C:100 M:95 Y:16 K:4
#:4A68B0	#:2A3382
R:37 G:185 B:236	R:32 G:114 B:184
C:66 M:6 Y:0 K:0	C:85 M:52 Y:1 K:0
#:25B9EC	#:2072B8
R:0 G:176 B:147	R:0 G:129 B:114
C:78 M:4 Y:55 K:0	C:87 M:28 Y:61 K:10
#:00B093	#:008172
R:188 G:211 B:103	R:242 G:141 B:42
C:30 M:2 Y:77 K:0	C:2 M:53 Y:96 K:0

PRIMARY

SECONDARY

TERTIARY

Horizontal Gradient.

The horizontal gradient is created from a blend of three primary colors. The gradient adds a sense of depth and texture to both the KenSci symbol, motif and background graphics. In terms of creating and using the gradient, there should always be a subtle feel to the placement of the graphic.

R:22 G:35 B:77 C:100 M:92 Y:39 K:39 #:16234D R:99 G:42 B:120 C:74 M:100 Y:18 K:6 #:632A78

R:232 G:14 B:138 C:2 M:99 Y:2 K:0 #:E7168A

33% BLUE

The dark blue represents data received from customers and prepared for ingestion.

33% PURPLE

The purple represents machine learning and data analytics the importance of KenSci's model.

33% PINK

The pink represents insights providing customers with critical answers to life- and cost-saving practices.

Font.



We use Museo Sans.

Museo Sans 900 For main titles	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
Museo Sans 700 Used when 900 is too thick	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
Museo Sans 500 For subtitles	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
Museo Sans 300 Body text with titles at 900, or if overlaid	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
Museo Sans 100 Primary body text, Titles	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Logo & Motif.



The following is the clear zone rule for the KenSci logotype. In order to gain maximum visibility, the KenSci logotype should always appear with a minimum area of clear space around the logo. This area should be free of any type or graphic element. Using center-line height of the "+," the clear space is a 1x area around the entire logotype. This rule applies to all versions of the KenSci logotype on all mediums.



The following is the clear zone rule for the KenSci motif. In order to gain maximum visibility, the KenSci motif should always appear with a minimum area of clear space around the logo. This area should be free of any type or graphic element. Using the height of one arm of the "K," the clear space is a 1x area around the entire motif. This rule applies to all versions of the KenSci motif on all mediums.





Across applications, every effort should be made to use the full-color Kensci logotype with Gradient. When needed, negatives can be used for the logotype symbol and motif. If the logotype symbol is used on material that is devoid of other color, use the pink/gradient with white "Ken." If the material has color variations already, use the all-white logotype symbol.





Using the Motif.

The motif is never used on primary materials. Cover pages, flyers, etc. all will get a logotype symbol. The motif can be used secondary, such as inside reports and on non-primary pages of decks and presentations. Use the negative motif when the page is devoid of color or on dark backgrounds, and the pimary motif on very light backgrounds.





Tagline.

The Tagline is vital to the Kensci brand. It can be either integrated into the logo or used independetly. If used independently, it must be pronounced, defined, and devoid of any other design. If used with the logotype symbol, the tagline must maintain a 2:1 ratio with the symbol with the typefont Museo Sans 100, all caps, Opt kerning.



Photography.

Photography at KenSci will always have two elements with an optional third: photo, color overlay, and potentially a tech-focused underlay between the two aforementioend layers. All photos used must reflect the healthcare industry. Abstract photos may be used, but they must directly reflect healthcare in some manner.

Tech underlays must be set to 50% opacity and not cover more than 20% of the photo's surface area. The underlay should be white, to brighten the photo. Underlays must represent the tech industry. Arrows and other established KenSci icons should not be used as underlays.

All photos used must reflect the healthcare industry. Abstract photos may be used, but they must directly reflect healthcare in some manner. Photos must be high-quality with good lighting and representative of our industry.





All photos are overlaid with one of three colors: pink, purple, or the KenSci gradient. Ensure the photos are light enough with the overlay in order to still be rendered visible. The gradient can be found mostly on cover photos. Use a solid pink overlay when discussing a problem and a solid purple overlay when discussing a solution.

Tech underlays are vector illustrations with transparent backgrounds with an opacity of no more than 50% that cover less than 20% of the surface area of the photo. Tech underlays help to create cohesion between the two industries, healthcare and technology, that KenSci is melding together. Tech underlays are not required, but do add depth to photographs and material.









A SYSTEM OF VALUE-BASED

Our Platform.



Images of our platform are shown on iMacs, MacBooks, and iPads. Up-to-date platform images will be accessible to you upon request or through KenSci dropbox. These images can be used throughout documents or presentations to show our product. These should be chosen first when seeking images for documents.



KenSci has a lot of visual assets to be used as accents in materials. The main icons found in KenSci branding are the arrows. As a company, KenSci is always looking to the future and that is reflected with the use of bright, rounded arrows. Use these when appropriate - icons can go from sleek to sloppy very quickly.

Icons &

Arrows.

Iconography.

An icon is an image that represents an application, a capability, or some other concept or specific entity with meaning for the user. Our icons empower our brand by adding standardized visual elements to bodies of text and complex ideas. All icons come in either white, to be used on dark backrounds, or in our gradient, to be used on light backgrounds. KenSci icons are thin-line with little to no fill.





Icons can also be extrapolated and used as large visual elements to enhance a section of text. Extrapolated icons should be the main visual element in the section it is used in, and should be devoid of background clutter. Make every effort to alter the extrapolated icon image without changing the identity of the icon - in order to bleed off the page.



MACHINE LEARNING MASTERS SESSIONS

ML Masters Sessions have been created to build on knowledge we've obtained through prior research and real-world experiences, and are designed to provide attendees with tangible tools that will enable your organization to survive and thrive under healthcare reform. You'll hear from experts and network with your peers on topics related to organizational competencies that will enable you to develop an organizational strategy with enhanced margins, reduced margin erosion, and real improvements in the patient-facing side of the business of healthcare. You'll review case studies from real organizations and share the challenges and opportunities they have encountered in their journey from volume to value. Master Sessions are limited in size to promote maximum attendee interaction. Recognized industry experts facilitate each program, and guide healthcare leaders in their journey toward value and a future where predictive health management and organizational effectivenees are the norm.

WHO ATTENDS THE ML MASTER SESSIONS

Senior healthcare finance and operational leaders

- Healthcare strategy leaders responsible for driving change in their organization
 Those who understand the big picture and want to interact with peers to
- Those who understand the big picture and want to interact with peers to discuss new, innovate strategies that drive value
- High-performing change agents
- Those charged with driving analytical driven cultural shifts in their organization
 Those interested in an intensive briefing to address the transformation of healthcare delivery

Brackets.

Brackets can be used to highlight a certain point or paragraph in a more complex visual layout of information. The top left bracket is the primary bracket set, with the other eight supporting bracket sets used only when other specific visual elements are in play, or are used as background design elements.



Clouds.

Clouds are used to convey major points or themes with minimal text. These points are standalone, the clouds are used as emphasis to the reader that an important (additional) value prop is included in the material. Clouds can also be used as headers for materials dealing with new business and ideas.



Accent Arrows.

Accent arrows are used as background/foreground accents, large-format in order to draw the reader in. These can be used to separate sections on documents, or for covers with a black or gray background.



Off-Page Arrows.

Off-Page arrows are used to highlight overarching themes, or can be used as cover page accents with no text. Keep these arrows separate from Accent Arrows and other arrows. These must remain large-format.

Design Arrows.

Design Arrows are used as small- to mid-size format icons to add depth with titles and main points. These arrows do not exist on covers unless all are used in a stylized grid.



Small Arrows.



Information Boxes.

The information boxes can be used for lists, describing apps and platforms, or encasing icons. These can be used to break up paragraps, at the top of paragraphs as header images, or as foreground design accents. Keep these boxes small- to mid-size format. Be careful with the amount of boxes used - ensure enough white space to keep the design clean and flowing.

Heartlines.

Heartlines can be used to break up large sections of information. They must always stay horizontal, with ample space between any text and the symbol. Heartlines can also be used at the bottom of multi-page documents in order to ensure brand cohesion. Stick with one heartline per document.

Backgrounds.

Ken)Sci #DEATHVSDATASCIENCE

USING DATA TO REDUCE WAIT TIMES AT EMERGENCY DEPARTMENTS

#DEATHVSDATASCIENCE

THE CLOUDY CRYSTAL BALL: LOOKING INTO ED DEMAND FORECASTING CHAILENGES

mergency Department Demand Predict

Emergency department (ED) overcrowding is recognized as a national problem that hinders the delivery of both emergency and downstream medical services. Overcrowding in the ED has been linked to decreased quality of care, increased costs, and diminished patient satisfaction. Were ED administrators and staff alerted prior to severe overcrowding, they might be able to intervene to alleviate increased demand, before health care quality and access become compromised. Delays, interruptions, and cancellations are so common that patients and clinicians regard them as an inevitable part of the process of healthcare. Hospitals, in particular, provide a prime example of the fact that waiting is intrinsic and almost intractable. Obtaining actionable data from patient flows is challenging. It requires data integration from multiple systems to support comparison across departments and workflows.

Challenges with existing models

Rule-based systems and regression-based prediction models for ED load prediction have existed for decades. Some models, like NEDDCS, are widely implemented across healthcare systems. Based on our understanding of existing approaches, we found that there existed a significant opportunity to improve upon the baseline and to help a premiere Kirkland-based health system adapt to an exceptional ED load prediction model to be powered by Machine Learning.

Improving staffing and reducing Emergency department wait times by 11% in 12 weeks.

Early Warning System

A real-time early warning system for overcrowding will allow administrators to alleviate the problem before reaching a crisis state. To our knowledge, there has not yet been an attempt by the customer to develop an early warning system for ED overcrowding. The goal of the present pilot is to evaluate the feasibility of implementing machine learning models of ED overcrowding as part of a real-time early warning system of impending spikes in ED demand.

Evaluation of an early warning system, like diagnostic and prognostic systems, considers the measures of sensitivity and specificity. Beyond this, the evaluation must address the question, "How far in advance can the system anticipate a crisis?" Timeliness is defined as the time lapse between when a system first detects a coming crisis, and when the crisis begins. The optimal operating point for an early warning system must be chosen based on the tradeoff between timeliness and the rate of false alarms.

Helping hand predict ED demand up to 4 hours ahead

With ED demand prediction at the heart of the customer's problem, KenSci was able to propose a solution at the pilot of the project. KenSci recommended implementing a locally-tuned, ML model-based solution that predicts patterns in Emergency Department Load (EDL) to enable operational staff to plan ahead for staffing, on daily, weekly, and monthly basis. The solution will enable the operational team to visualize future demand and act on precise prediction to optimally staff the ED.

Using Data to Reduce Wait Times at Emergency Departments

To build this prediction system, KenSci was able to source data from records like EMR, Admit/Discharge/Transfer Logs and Public domain data across variables such as temperature, infectious disease outbreak etc.

In order to gain insights from the data, KenSci adopted the strategy to: • Create data intake pipeline for the KenSci cloud platform and pdate on 15 minute (or event-driven) time scale.

 Use EMR-derived/NEDOCS variables to feed models predicting ED patient flow and acuity over time windows ranging from 1.4.8, 12 and 24 hourly intervals, and weekly.

Validate and tune models with help of ED clinicians and data scientists.
Provide model outputs into a dashboard visualization showing projected flow count and acuity, as well as model performance characteristics.

What would result in the long term

The presented pilot plan for ED demand prediction enables: 1. Empirical validation of the KenSci Risk prediction platform and accompanying demand prediction algorithms to help increase forecast accuracy of Emergency Department demand. KenSci will train models based on two years of data and compare forecast accuracy with a third year of data (forecast vs. actual base case) to demonstrate precision and accuracy metric improvement on the customer's native data. 2. Ability of the customer's analytics team to build and deploy additional machine learning models for ongoing use case scenarios.

AT A GLANCE

The customer was a leading public health system, based in Kirkland WA. They serve over 800.000 customers and consistently seek to provide the highest quality of care, along with patient safety. They staff over 3.000 members including 900+ physician partners.

The customer services a rapidly growing metropolitan area. Their emergency departments often suffer from overcrowding, leading to patient dissatisfaction and high staff cost.

 Implement NEDOCS based ED control capability as a starting point.

- Overlay historical traffic patterns with social and public data for weather, pollen, holidays, traffic.
 Use enriched data set to predict overcrowding , 2, 4 and 8 hours before.
- Provide weekly & monthly demand patterns.

11% reduction in wait times for patients in hospital ED.

 Chief Nursing Officer leverages weekly and monthly predictions to optimize nursing staffing requirements.

• ED doctors adjusts schedules and shifts based on 2-4-8 hour traffic predictions.

Using Data to Reduce Wait Tir

RISK PREDICTION PLATFORM FOR HEALTHCARE

CLINICAL • FINANCIAL • OPERATIONAL

PREDICTING THE FUTURE WITH FROM YOUR PAST.

KenSci ingests dat help predict clinica operational risk. As KenSci can provid cases

#DeathVsDataScience

WERED BY MACHINE LEARNING UILT BY DOCTORS, DATA SCIENTISTS AND DEVELOPERS

Ne Are On A Mission

licting the Future From Your Past Data

redicting the Future From Your Past Data /ink MersCi, Healthcare organizations are able to gain sights on "Who might get sick?", "What drives our eathcare costs?", "How can we solve these problems?" and "How can we serve patients more efficiently across te continuum of care?". Kensci ingests data from existing ata sources, such as EMR, claims data, finance & billing outpresetions patients more to indexide. nd other patient generated sources, to identify patterns nd areas that are most susceptible to risk.

Platform Specifically Built for Healthcare

he KenSci model bank dynamically selects from 180+ eathcare-specific Machine Learning models developed n very large (10M+ rows) datasets to provide statistically gnificant outcomes. Customizable apps and HL7 and her format compliant APIs provide predictive and rescriptive insights that are inserted directly into clinical orkflows and EMR systems.

With 1804 pre-built models and an average deployment time of 12 weeks, KenSci is able to demonstrate visible ROI in less than 90 days.

Get In Touch With Us hello@kensci.com

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ML powered Risk Prediction ML model library and assembly Visualization, reports, alerts and APIs APIs For CFO, Medical Directors, Pop. Health Mgrs., Case managers and auditors

KenSci.ai

KenSci.io

ML ready Integrated Data Network Ingests and assembles data m Claims, CRM, Psycho-ial, G&A, EHR and patien

KenSci.sdk \Box

del development and gration Toolkit ntegration lookkt Train ML models and integrate them with existing apps Build your own applications on KenSci Deliver rich user experience

LET'S GET STARTED.

<u>**************</u>

Global HQ 615 2nd Avenue, Suite 700 Seattle, WA 98104 USA

#DEATHVSDATASCIENCE

A \$4 trillion problem that needs better math

We are building the world's first vertically integrated machine learning platform for healthcare. And our ambition is to make healthcare more proactive, more coordinated and more accountable. Fast. We are helping customers fight death with data science. Our risk prediction platform and apps for healthcare are powered by Machine Learning to arm the healthcare industry with cognitive functions that improve patient care and business operations.

Based out of Seattle Washington, KenSci partners closely with the University of Washington, Microsoft Research and Microsoft Accelerator with our team of Physicians, Data Scientists and Developers to build a platform that redefines 21st century healthcare.

In this e-book, you will find a list of blogs and press discussing the work of KenSci.

PRESS MENTIONS

FORBES Here's A Growing Job That Earns More Than \$100K: The Nurse Technologist	http:/	/bit.ly/2wDpECh
GEEKWIRE These 10 Machine Learning and Data Science Startups Make Up The Newest Microsoft Accelerator Class	http:/	/bit.ly/2w46XEm
HUFFINGTON POST Artificial Intelligence For Healthcare Is Booming	http:/	/bit.ly/2koOkcB
SEATTLE TIMES Health-Data Startup KenSci Lands \$8.5 Million To Expand	http:/	/bit.ly/2kwung8
MEDCITY NEWS Give Them Data Or Give Them Death: Startup Kensci Raises \$8.5m	http:/	/bit.ly/2jiKSeR
DATA INFORMED How Machine Learning is Transforming Healthcare	http:/	/bit.ly/2ngg59X
CAMBIA GROVE KenSci – A Case Study in Community Coming Together	http:/	/bit.ly/2w4dQpb

FROM MICROSOFT

Gavriella Schuster Highlight On Partnering In Healthcare Around AI http://bit.ly/2sNozpP

UGHT LEADERSHIP

ath With Data Science In Healthcare	http://bit.ly/2xNfugK
s Perspective – Reducing Care Variance and Utilization	http://bit.ly/2j0C42h
s Perspective – Reducing Hospital Acquired Conditions	http://bit.ly/2iZGxCm
nce Professor's Perspective – Reducing Length Of Stay In	http://bit.ly/2f0F1LZ

FOMER STORIES

I HEALTH CASE STUDY ine Learning On Azure And Cortana To Save Lives And Money tients In Asia	http://bit.ly/2gfYLwG

CASE STUDY ure ML To Predict Death From Heart Failure

KENSCI

(<mark>Ken</mark>)Sci

http://bit.ly/2x8CRo6

KenSSY Machine Learning Platform and Adanced Analytics Solutions answere afflicat questions can as "Who might get sick", "What drives can healthcare costs", "How can we solve these problem?" and "how can we serve platients more efficiently across the continuum of care" KenSS's Platform is engineered to ingest transform, and cells healthcare data across Clinical, Claims and Patient -Conereated sources. The KenSS' model back dynamically splasets from 200+ healthcare-specific Machine Learning models developed on vey large 10M+ royoid battest to provide statistically significan cuscomes. Customizable apps and HL7 and other format are inserted directly into clinical workflows and EMR systems.

Headquartered in Seattle, KenSci is on a mission to equip healthcare organizations with advanced analytics to fight Death with Data Science.

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#DeathVsDataScience

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KenSci is the world's first vertically integrated machine learning platform for healthcare, making it more proactive, coordinated and accountable, fast. KenSci's platform is engineered to ingest, transform and integrate healthcare data across clinical, claims, and patient generated sources. A library of over 180+ prebuilt models and modular solutions for clinical and operational risk prediction enable customers to ask and answer harder questions faster, with average deployment taking 12 weeks and ROI visibility in 90 days.

KenSci is headquartered in Seattle, with offices in Singapore and Hyderabad.