

Webinar Housekeeping

This webinar is being recorded. In the next few days, you should expect to receive an email notification with a link to the recorded session and a copy of the presentation materials.

Please ask questions using the GoToWebinar window! If there are any questions that we do not get to address before we conclude, we will follow up with you after the session.

ABOUT BLUEGRANITE

your data & analytics experts

DATA



ACQUISITION

ETL / ELT, Batch, Streaming



PREPARATION

Enrichment, Governance, Master



PROVISIONING

Data Lakes, Data Warehouses

ANALYTICS



MODELING

Business Logic, Cubes



CONSUMPTION

Monitoring, Reporting, Exploration



ADVANCED

Data Mining, Predictive, ML



DISCOVER

Explore innovative ideas to understand value and build a foundation for success beyond requirements to possibilities

CREATE

Enable users and help address key pain points, realize gains, uncover insights

REALIZE

Extend ROI and harvest value from your investments by aligning culture

Microsoft partner delivering Business Intelligence, Advanced Analytics, and Data Management solutions on Microsoft's Azure, SQL Server and Power BI platforms

www.blue-granite.com
Phone: 877.817.0736 | e-mail: sales@blue-granite.com

Microsoft
Partner



Gold Data Analytics
Gold Cloud Platform
Gold Data Platform

Introduction to Personalized Marketing with Azure Machine Learning



Presenters:

Andy Lathrop, Principal Consultant



Jason Cantrell, Senior Consultant



Colby Ford, AI Architect



Agenda

- What is Personalized Marketing?
- Benefits and Business Value
- Machine Learning Techniques and Challenges
- Azure Machine Learning
- Demo
- Q and A



What is Personalized Marketing?

What content does a consumer want to see?

What information about the product should be presented?

At what stage in the buying process is a consumer?

When is the consumer expected to make a purchase?

marketing experiences that
target specific types of
customers through your content



Business Value of Personalization

by 2018, organizations that have fully invested in all types of online personalization will **outsell** companies that have not **by more than 30%**

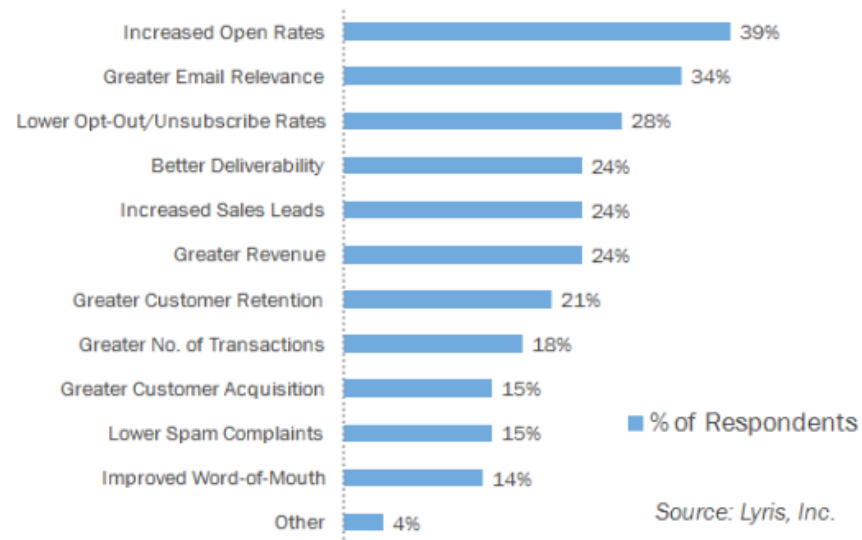
by 2020, **90% of brands** will practice at least one form of marketing personalization.

– Gartner

68% of marketers say personalization based on behavioral data has a high impact on ROI, and 74% say it has a high impact on engagement. But **only 19% do it.**

– HubSpot (CRM Provider)

Email List Segmentation Results



- Engagement / nurturing
- Click through / open rate
- Conversions
- Page views / visit



- Bounces / unopened email
- Marketing costs
- Sales cycle time

Personalization Maturity

Machine learning: recognizing complex patterns from examples in order to predict

Targeted marketing / SEO

Machine Learning classification/recommender systems
– more individualized

Data

- Registered preferences
- Transaction history
- Click stream
- 3rd party, marketing provider
- Ratings

List segmentation - Advanced

Machine Learning Clustering/Classification
targets narrow set of groups / personas

Data

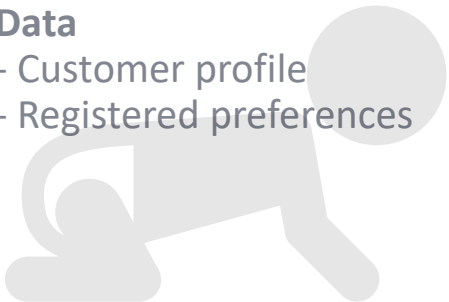
- Registered preferences
- Transaction history

List segmentation - Basic

Manual, rule-based – targets broad set of groups / personas

Data

- Customer profile
- Registered preferences



crawl



walk




run

Personalization Maturity

Targeted marketing / SEO


- **Machine Learning classification/recommender systems** – more individualized
- **Data:**
 - Registered preferences
 - Transaction history
 - Click stream
 - 3rd party, marketing provider
 - Ratings

run

 **Recent Ad Activity**
See ads you recently interacted with and easily follow up on the ones you care about

Recent


Saved 0



You clicked this on August 21

Live Webinar


Learn how to simplify and scale data engineering pipelines with Del... Databricks



You clicked this on August 13

Try the New BikeNook™


Free Space Anywhere! The Brilliant New Way To Quickly & Easily ... Bike Nook



You clicked this on July 23

OluKai

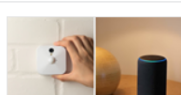
We've made it easy to adventure with the Nohea Moku. Featuring n... OluKai



You clicked this on July 20

Enjoy Summer Savings!

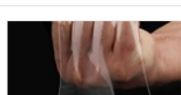
Save BIG with our "School's Out" summer sale! Use code 'FBSUM... Artkive



You clicked this on July 15

Here Are Some Of The Best Prime Day Deals On A...


Deals on Fire TV Sticks, Kindles, Echos, and more! BuzzFeed



You clicked this on July 15

Nano Tape Stick Anything!


This Nano Adhesive Tape stick to anything but leave no damage on... Home Stuff



You clicked this on July 14

Stickable & Restickable (!) Photo Tiles!


Made in the USA! Mixtiles



You clicked this on July 8


Take AI from research to production

Build neural networks with PyTorch, an open source ML framework... PyTorch



You clicked this on June 25

(6/29) We're in CASTLE ROCK, CO! This Saturday, June 29th, co... On The Hook Fish and Chips Food Truck

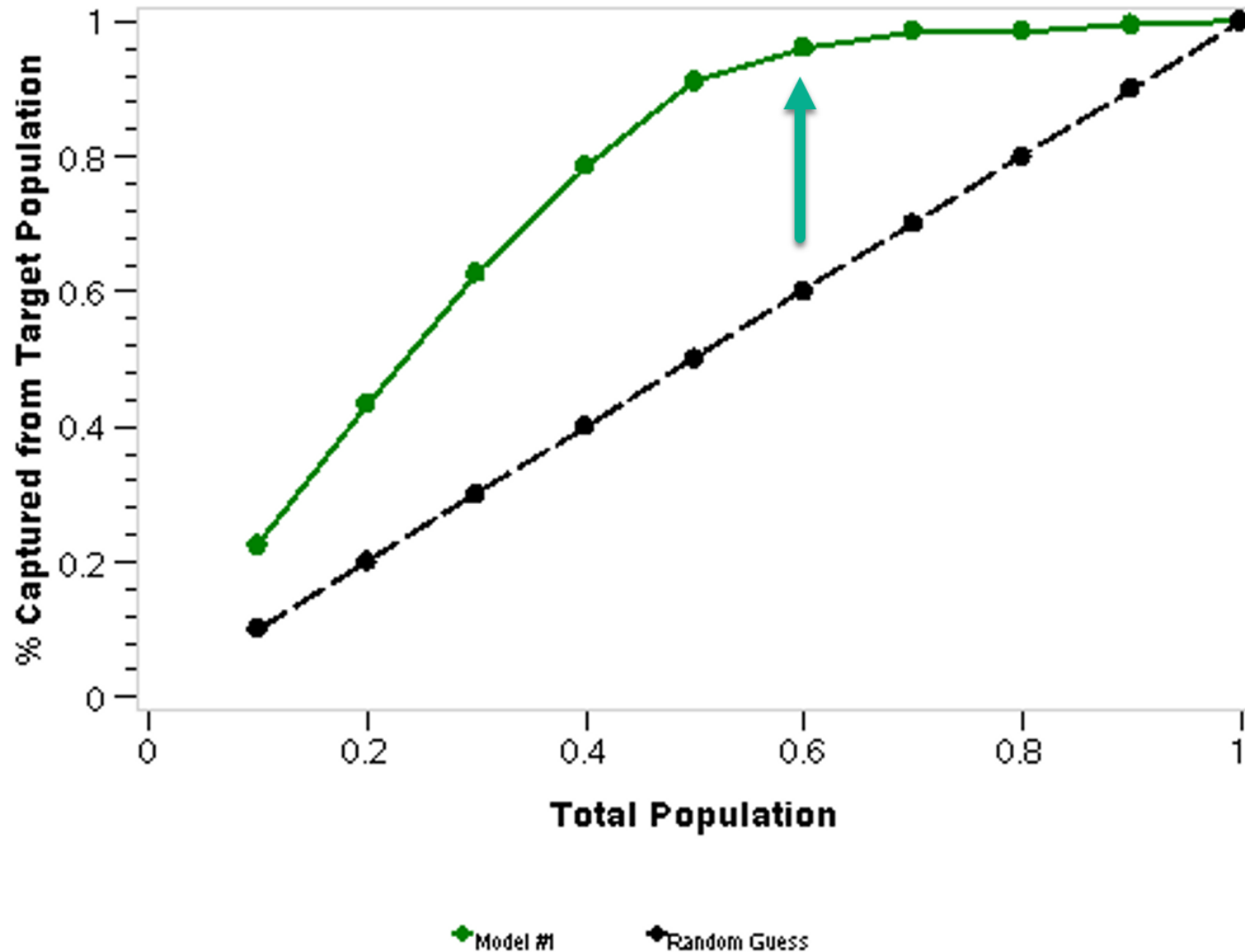


You clicked this on June 5

Why This Luggage Company Is Causing So Many P...

Take the hassle out of your next trip and unpack at your destination... RISE gear

Machine Learning for Personalization



Scenario

Use personalization to predict which customers will respond to email offer for a new product

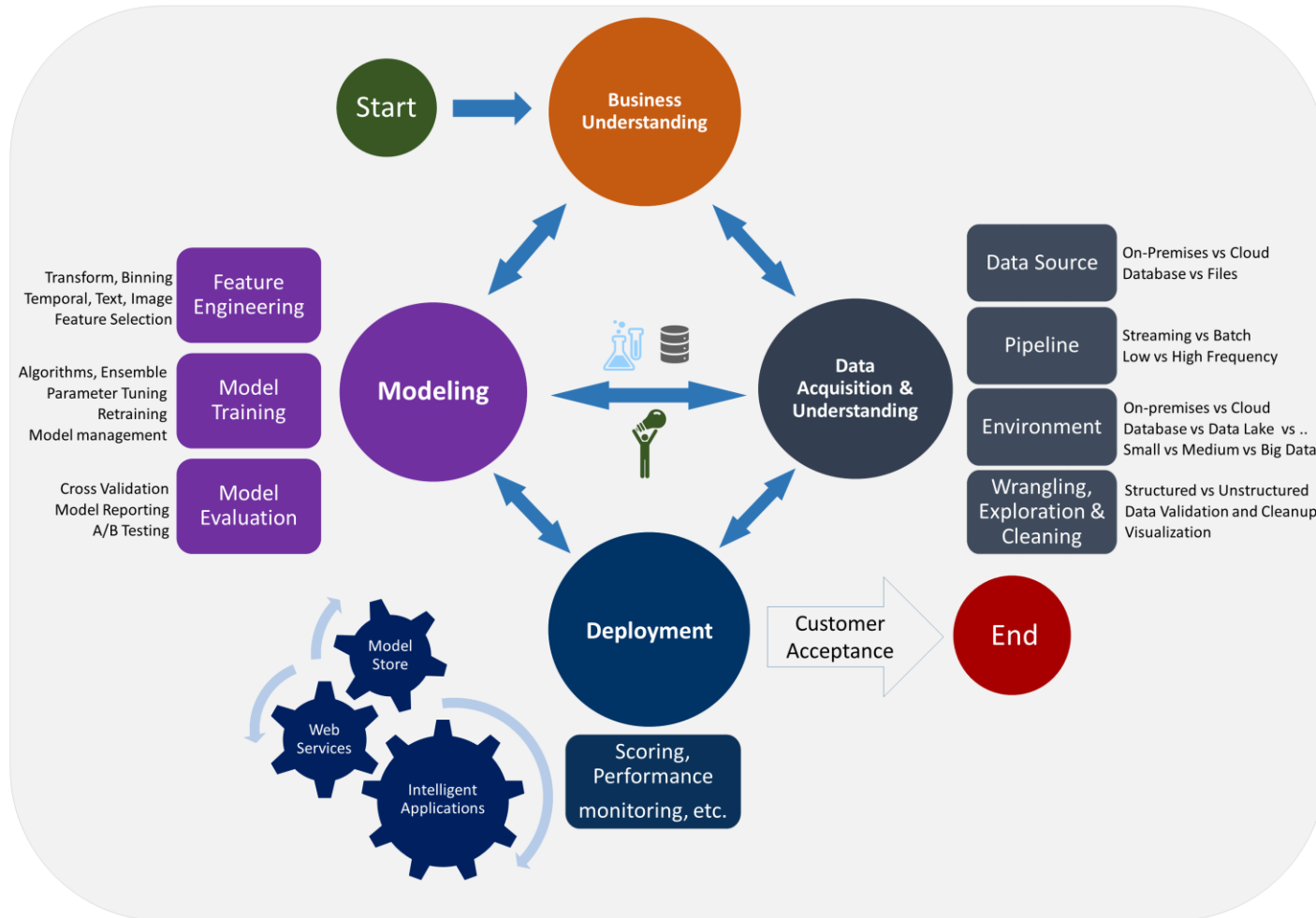
Data

Customer profile + previous transactions + offer info

96% of relevant audience reached through contact with **60% of total audience**

36% lift with machine learning

Machine Learning Model Lifecycle









Challenges:

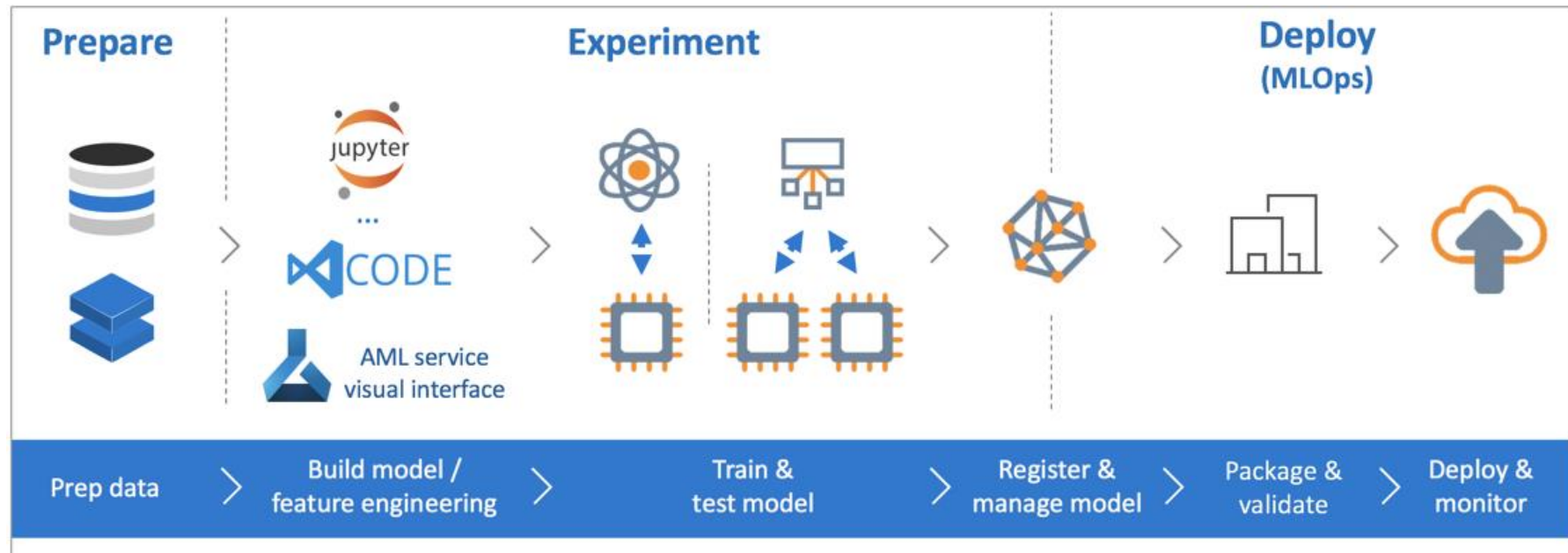
- How do we scale to larger datasets?
- How do we collaborate?
- Which model was best and why? Are you sure?
- How do we actually use this model?
- How do we work with DevOps?

Azure Machine Learning Service Overview

Cloud-scale service to simplify and accelerate the building, training, and deploying machine learning models




- Python SDK; Use familiar libraries and frameworks in notebooks, IDEs and CLI
- Cloud resources for monitoring, logging, and organizing your machine learning experiments. Keep track of the code, compute, datasets and results used in training the model
- Train models locally or with on-demand, scalable, cloud resources, including CPU and GPU clusters
- Deploy to both cloud and the edge as web services for real-time and batch scoring
- Improved productivity with hyperparameter tuning, automated ML, infrastructure control, and pipelines

-  Experiments
-  Pipelines
-  Compute
-  Models
-  Images
-  Deployments










Azure Machine Learning Workspace Overview

Authoring (Preview)

-  Automated machine learning
-  Notebook VMs
-  Visual interface

Assets

-  Experiments
-  Pipelines
-  Compute
-  Models
-  Images
-  Deployments

 **aiwebinaramls**
Machine Learning service workspace

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Authoring (Preview)

Automated machine learning

Notebook VMs

Visual interface

Assets

Experiments

Pipelines

Compute

Models

Images

Deployments

[Download config.json](#) [Delete](#)

Resource group : [aawebinar-demo-rg](#)

Location : West US 2

Subscription : [BlueGranite Demos](#)

Subscription ID : d33098f5-4a90-4784-be1a-db39e054a7b0


Storage : [aiwebinaramls4449883837](#)

Registry : [aiwebinaramla84350bc](#)


Key Vault : [aiwebinaramls7463106630](#)

Application Insights : [aiwebinaramls7837229309](#)


Getting Started




Get Started with Sample Notebooks (Preview)
Quickly get started with the Python SDK and run sample experiments with Azure Machine Learning Notebook VMs.




Build a model using the Visual Interface (Preview)
Drag and drop existing components to create new models.




View more samples at GitHub
Get inspired by a large collection of machine learning examples.



Create a new Automated Machine Learning Model (Preview)
Automatically create a model from your existing data.



View Documentation
Learn how to use Azure Machine Learning.



View Forum
Join the discussion of Azure Machine Learning.



Demo

Recap

- Personalization involves decisions about content to be shown to different groups of customers, based on available data.
- Using techniques like machine learning for personalization can lead to significant business benefits like increased engagement and sales while strengthening your brand.
- Data science at scale for production usually involves many steps in a complex life cycle.
- Azure Machine Learning offers services to help manage the ML lifecycle while allowing data scientists to collaborate and keep using preferred tools and frameworks



Getting Started

Get started with Azure Machine Learning for free

<http://aka.ms/AMLfree>

[Azure Machine Learning service example notebooks](#) (GitHub repository)

[Building recommender systems with AML service](#) (blog)

[Microsoft recommender system repository](#) (GitHub repository)

Q and A

Thank you for attending!

Reminder: In the next few days, you should expect to receive an email notification with a link to the recorded session and a copy of the presentation materials

