

Azure Machine Learning Studio

Deepshikha Sinha Santosh Kumar Boyina

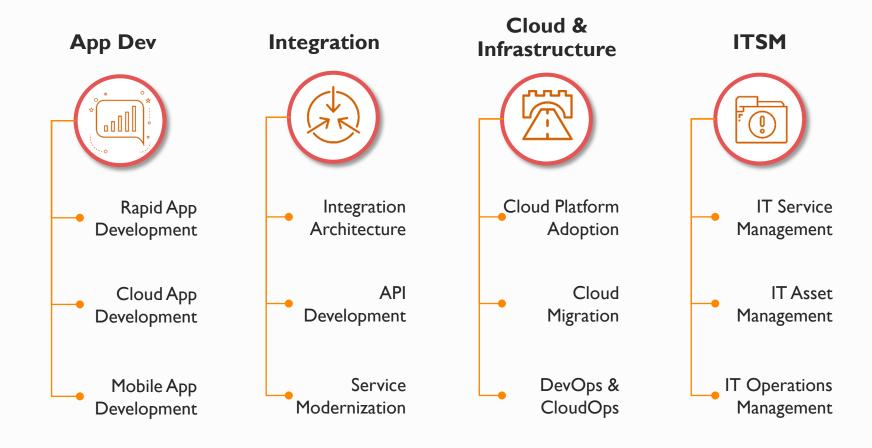




OUR DIGITAL & CLOUD SERVICES



Customers trust Value Momentum to rapidly deliver new experiences and stay competitive in today's digital-centric market.*



^{*}To learn more, please log on to <u>ValueMomentum – Digital & Cloud Services</u>



Agenda



- What is Machine Learning?
- ML with Microsoft
- Why Azure ML Studio?
- Features
- Demo



What is Machine Learning?



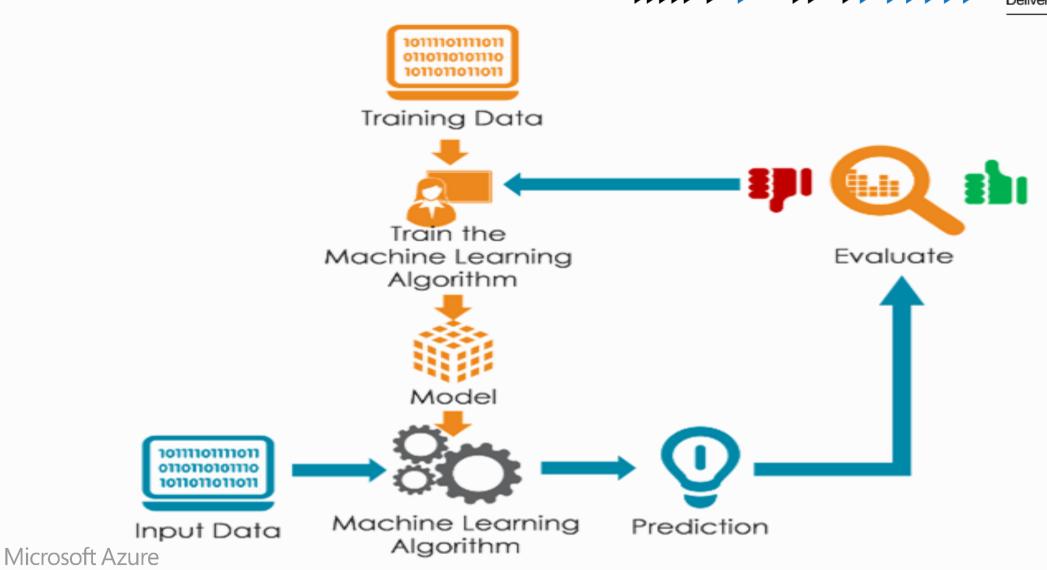
The science of getting computers to act without being explicitly programmed – Andrew Ng

THIS IS YOUR MACHINE LEARNING SYSTEM? YUP! YOU POUR THE DATA INTO THIS BIG PILE OF LINEAR ALGEBRA, THEN COLLECT THE ANSWERS ON THE OTHER SIDE. WHAT IF THE ANSWERS ARE WRONG? JUST STIR THE PILE UNTIL THEY START LOOKING RIGHT.



Process

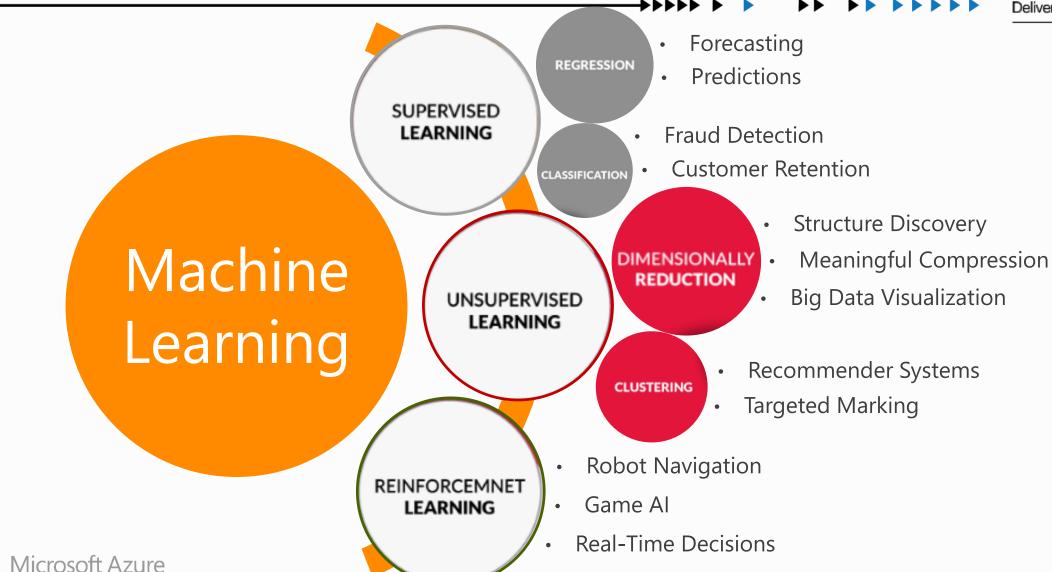






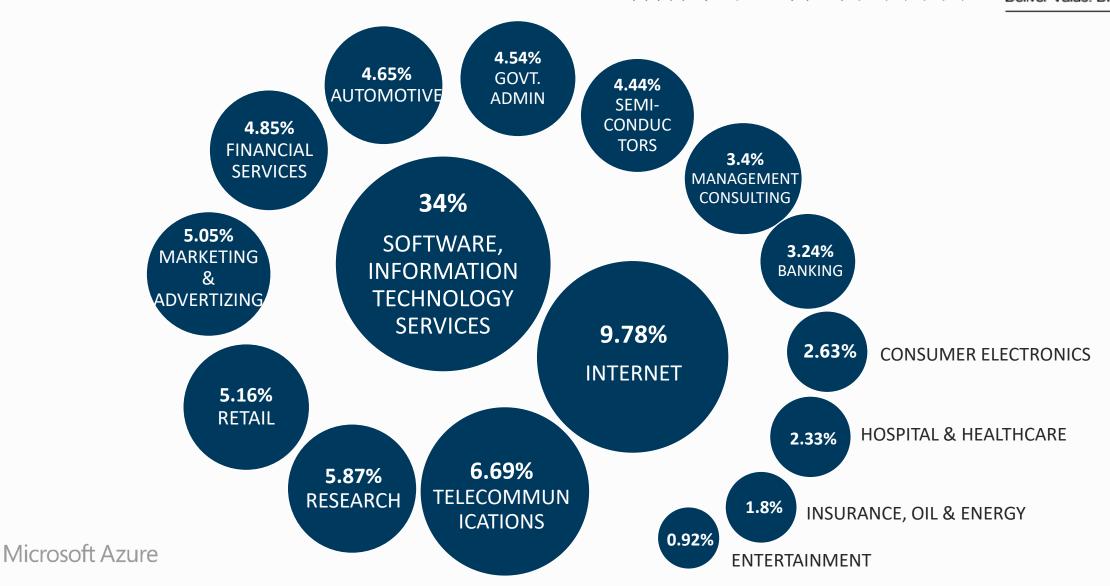
Classification





Scope



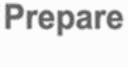




ML with MS









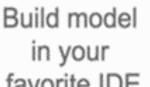


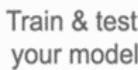


Prepare your data



jupyter



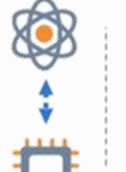




with the model & dependencies

Deploy as a web service & monitor













Deploy



Train & test your model

Build an image



Why Azure ML?











- Easy Implementation of Web Services
- Unlimited extensibility

































PROJECTS



EXPERIMENTS



WEB SERVICES



NOTEBOOKS



DATASETS



TRAINED MODELS



SETTINGS

Collections of experiments, datasets, notebooks, and other resources representing a single project.







PROJECTS



EXPERIMENTS



WEB SERVICES



NOTEBOOKS



DATASETS



TRAINED MODELS



SETTINGS

Experiments that you have created and run or saved as drafts.







PROJECTS



EXPERIMENTS



WEB SERVICES





NOTEBOOKS



DATASETS



TRAINED MODELS



SETTINGS







PROJECTS



EXPERIMENTS



WEB SERVICES



NOTEBOOKS

Jupyter notebooks that you have created.



DATASETS



TRAINED MODELS



SETTINGS







PROJECTS



EXPERIMENTS



WEB SERVICES



NOTEBOOKS



DATASETS

Datasets that you have uploaded into Studio.



TRAINED MODELS



SETTINGS







PROJECTS



EXPERIMENTS



WEB SERVICES



NOTEBOOKS



DATASETS



TRAINED MODELS



SETTINGS

Models that you have trained in experiments and saved in Studio.







PROJECTS



EXPERIMENTS



WEB SERVICES



NOTEBOOKS



DATASETS



TRAINED MODELS



SETTINGS

A collection of settings that you can use to configure your account and resources.

Azure vs Other Platforms



Speech & Text Analysis



	Amazon	Microsoft	Google	IBM
Language Recognition	100+ Languages	120 Languages	120+ Languages	60+ Languages
Topics Extraction	✓	✓	✓	✓
Spell Check	×	✓	✓	×
Auto Completion	×	✓	✓	×
Voice Verification	✓	✓	×	×
Intention Analysis	✓	✓	\checkmark	✓
Relations Analysis	×	✓	×	✓
Sentiment Analysis	✓	✓	✓	✓
Syntax Analysis	×	✓	✓	✓
Parts of Speech Tagging	×	\checkmark	✓	×
Filtering Inappropriate Content	×	✓	✓	×



TYTICI OSOTU / NZGI C

Image & Video Analysis VALUE MOMENTUM



	Amazon	Microsoft	Google	IBM
Face Recognition	✓	✓	×	×
Facial Landmarks	\checkmark	\checkmark	✓	×
Feature Detection	✓	✓	✓	×
Similar Faces	×	\checkmark	×	×
Emotion	✓	✓	×	×
Celebrities Detection	\checkmark	\checkmark	×	×
OCR	✓	✓	✓	✓
Video Analysis	\checkmark	✓	✓	×
Custom Model Creation	×	✓	×	✓
Landmarks	×	✓	✓	✓



ML Services

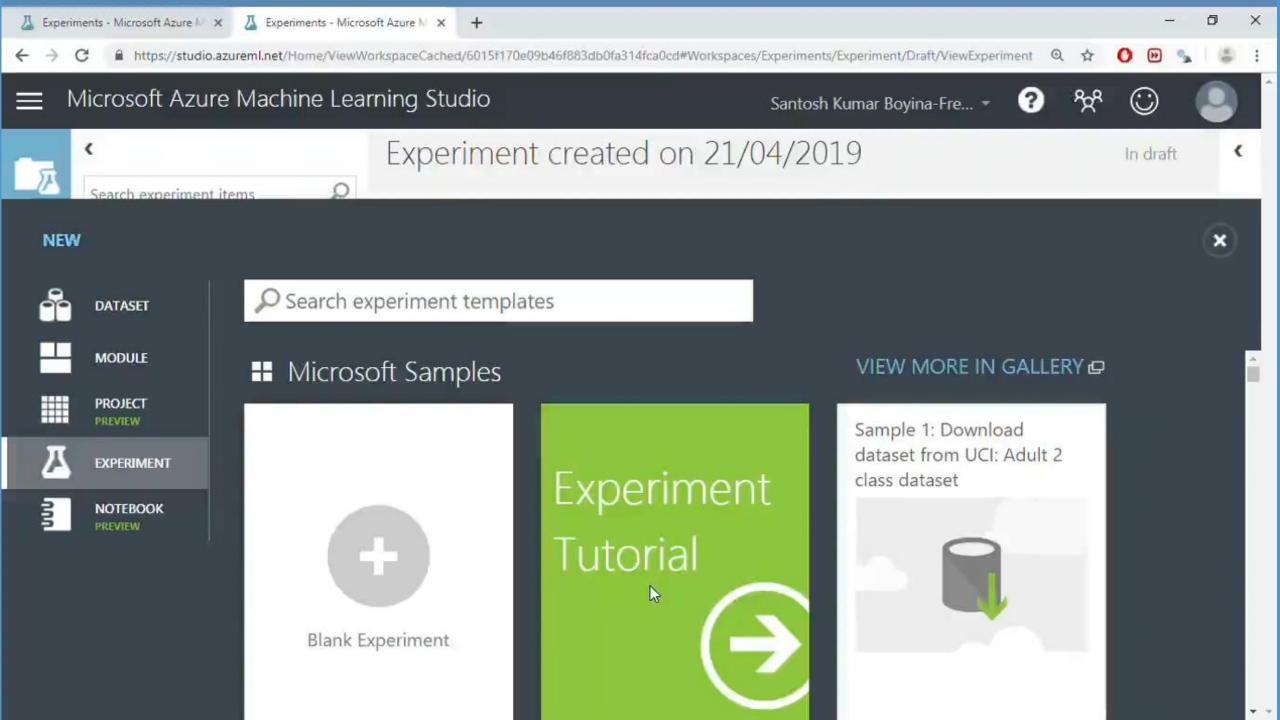




	Amazon	Microsoft	Google	IBM			
Automated and Semi-automated ML services							
	Amazon ML	Microsoft Azure ML Studio	Google Prediction API	IBM Watson ML Model Builder			
Classification	✓	✓	Deprecated	✓			
Regression	\checkmark	\checkmark		\checkmark			
Clustering	✓	✓		×			
Anomaly Detection	×	✓		×			
Recommendation	×	✓		×			
Ranking	×	✓		×			

Demo Use Case

Automobile Price Prediction



Demo



© 2016 Microsoft Corporation. All rights reserved. Microsoft, Windows, Windows Vista and other product names are or may be registered trademarks and/or trademarks in the U.S. and/or other countries. The information herein is for informational purposes only and represents the current view of Microsoft Corporation as of the date of this presentation. Because Microsoft must respond to changing market conditions, it should not be interpreted to be a commitment on the part of Microsoft, and Microsoft cannot guarantee the accuracy of any information provided after the date of this presentation. MICROSOFT MAKES NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AS TO THE INFORMATION IN THIS PRESENTATION.