

Learning Machine Learning (Just Be Predictive)

HELLO!

I am Abhishek Gupta

Cloud & Mobile Evangelist
@Xebia India (Xpirit Division)

CloudAndMobileBlog.com



@AbhiForTweeting



Agenda

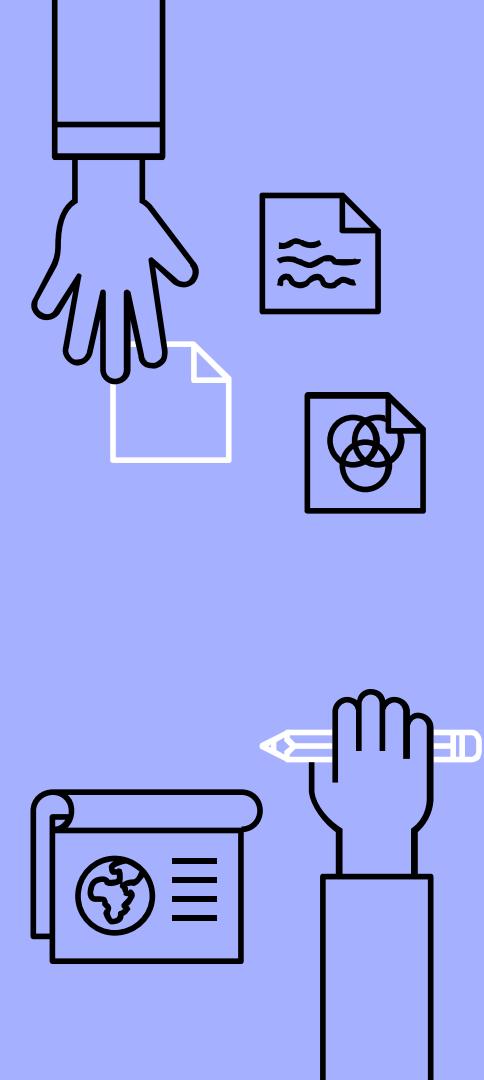
Describing machine learning

Introducing Azure Machine Learning

Describing business scenarios

Demonstrating the machine learning flow

Summary

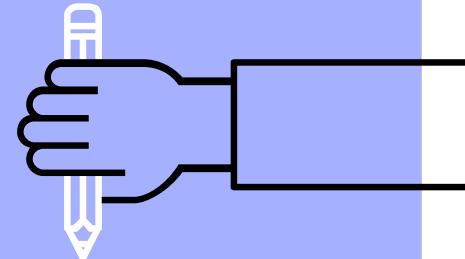


What Bill Gates said

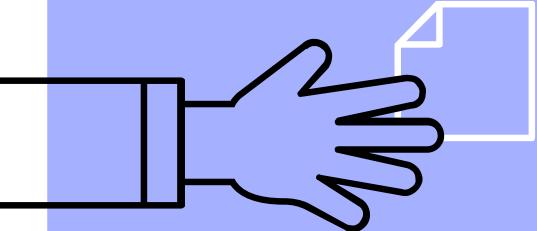


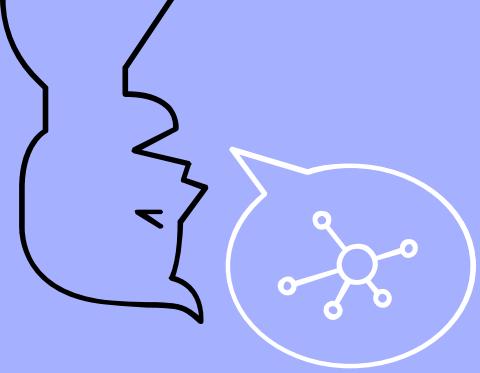
“If you invent a breakthrough in Artificial Intelligence, so **machines can learn**, that is worth 10 Microsoft”



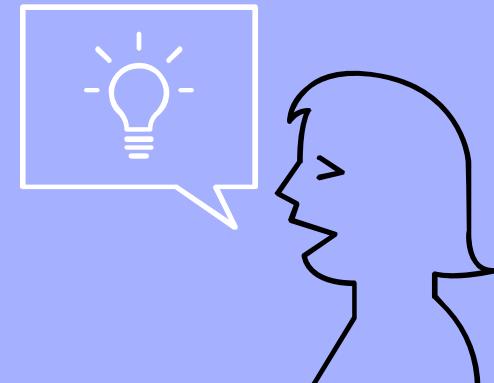


What is Machine Learning





Machine Learning is a
science of getting
computers to act
without being explicitly
programmed.

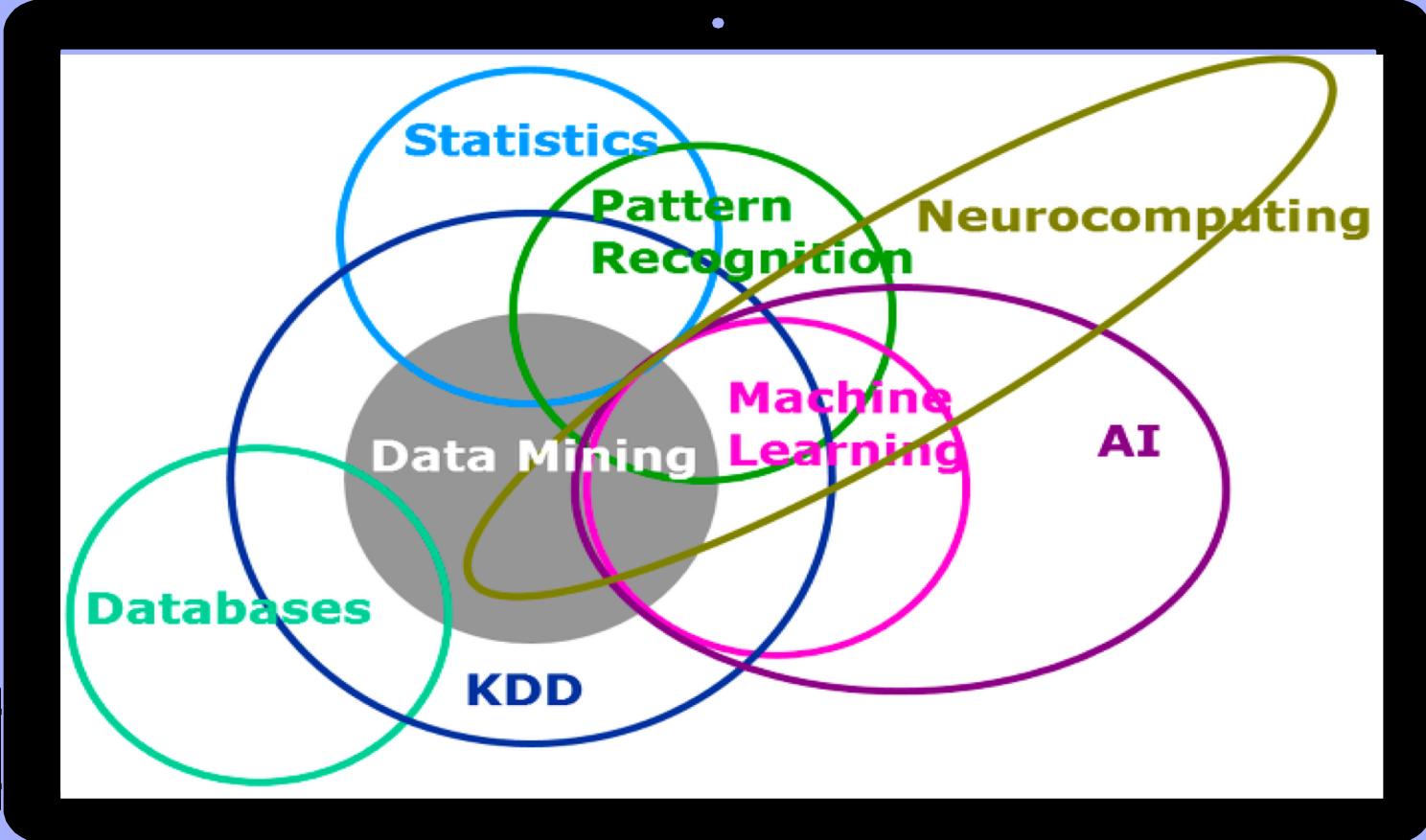


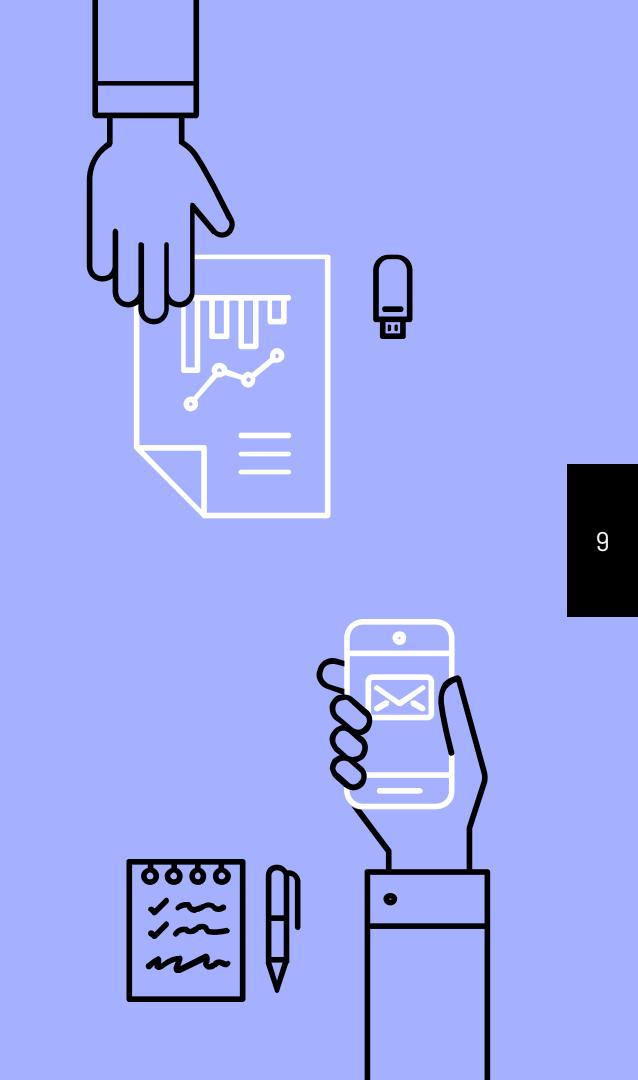
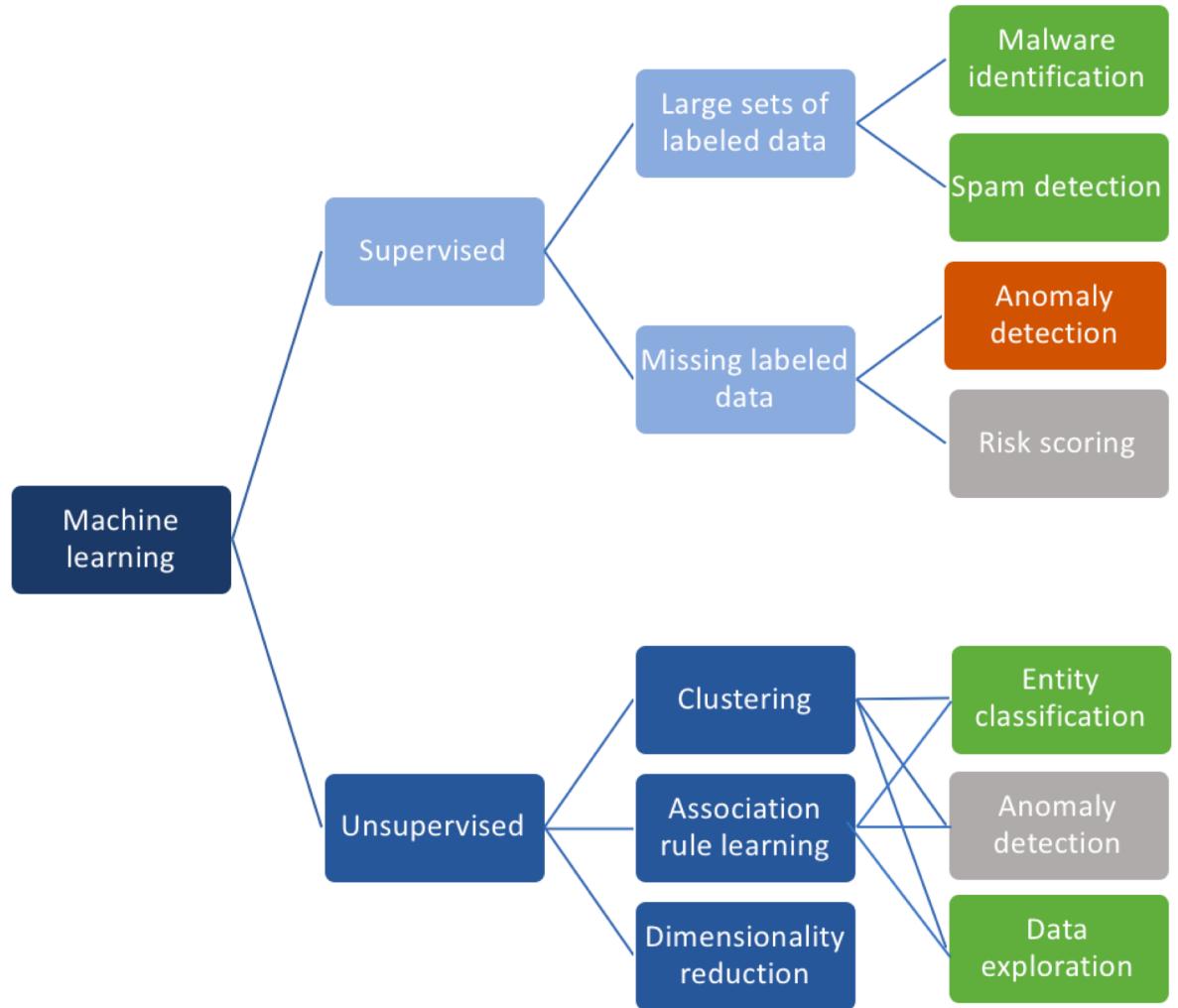


Azure Machine Learning

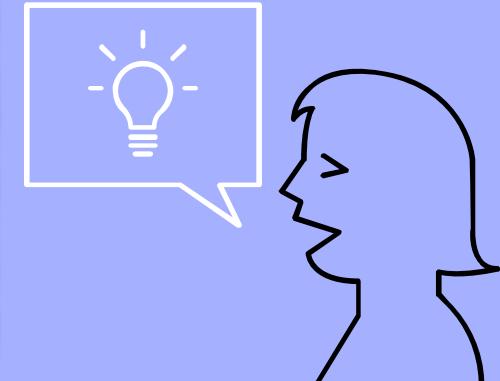
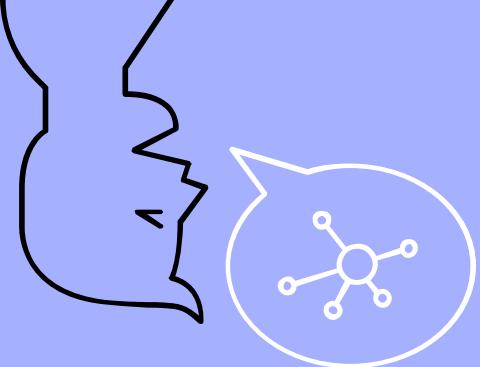
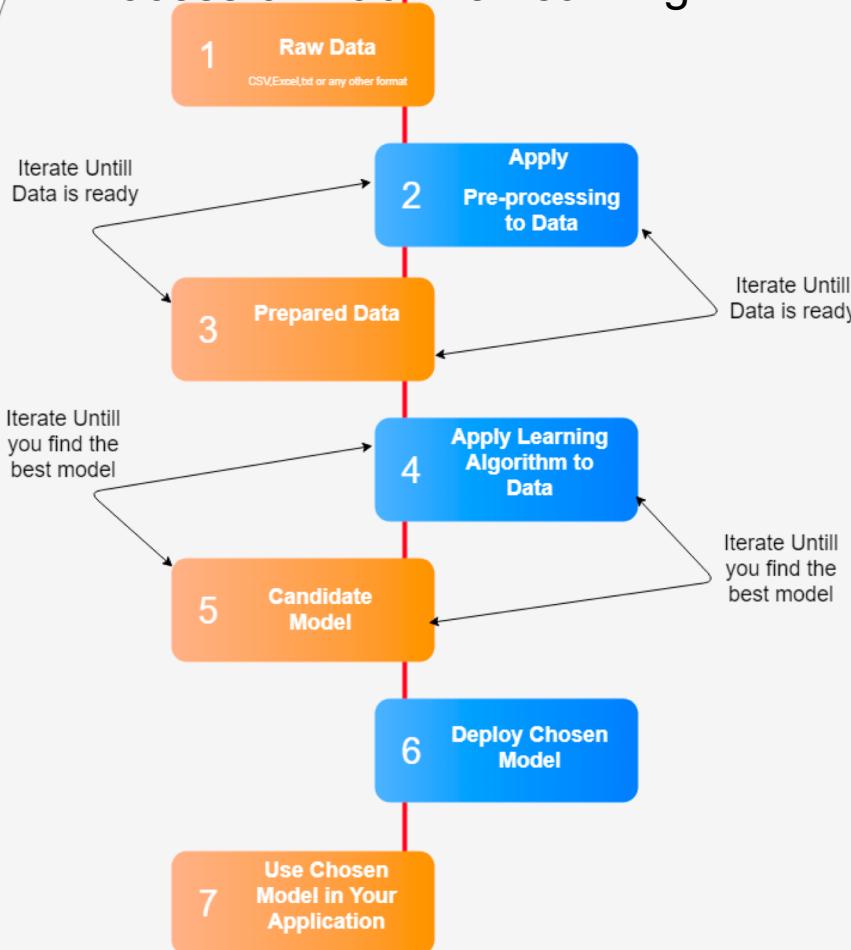
A fully-managed cloud service that enables you to easily build, deploy and share predictive analytics solutions.





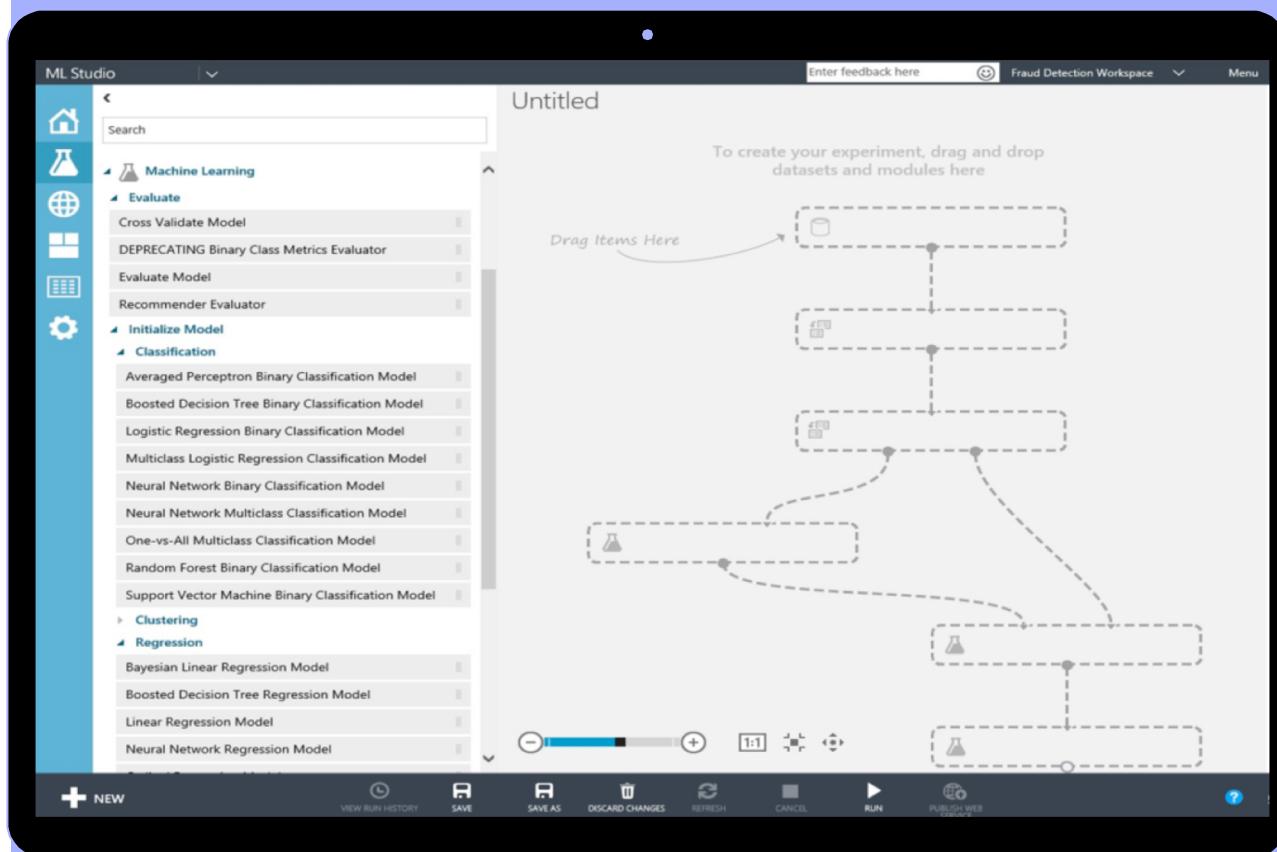


Process of Machine Learning



Azure ML Studio

- Reduced Complexity
- Access Through Web Browser, no need to install any thing
- Collaborate work with anyone
- Visual composition, easy to use, No Coding
- Good storage of Algorithm (Use in Bing search, Xbox..)
- Have good support for R studio, Python and Jupyter notebook



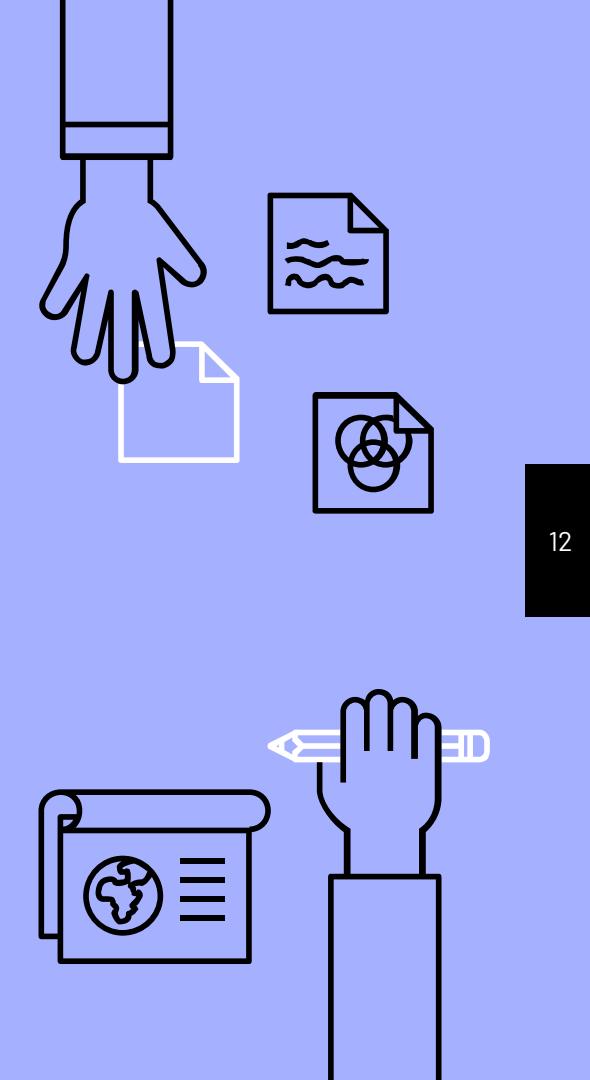
WHAT IS A ML MODEL?

ML applies statistical techniques to large amounts of data, looking for the best pattern to solve your problem.

It then generates an implementation—code—that can recognize that pattern.

This generated code is referred to as a **model**.

Model can be called by applications that need to solve this problem.

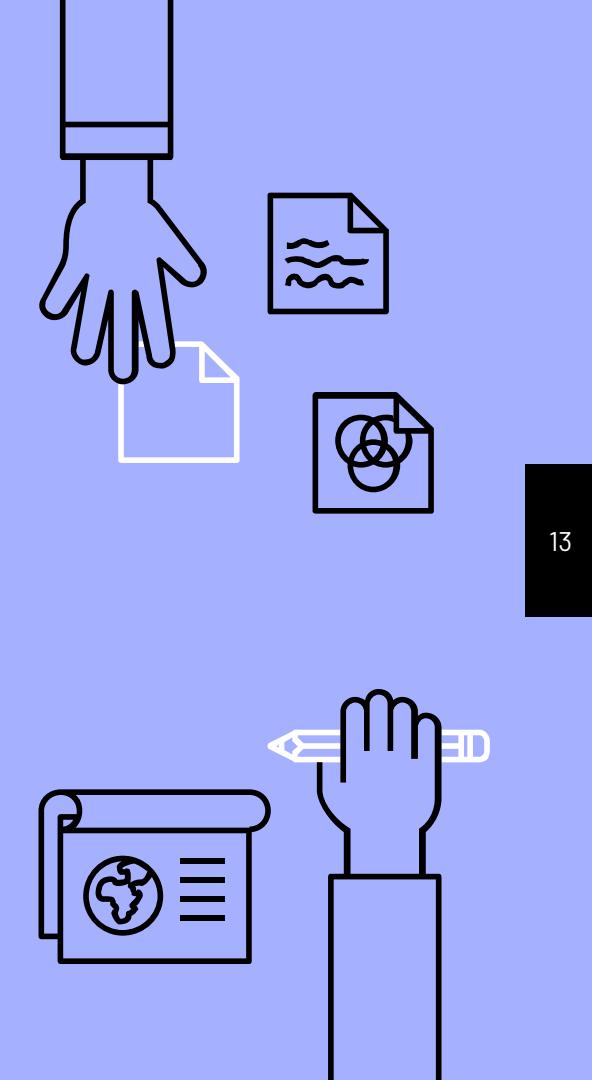


WHAT IS LOSS ?

The **loss** is the penalty for a bad prediction.

That is, the **loss** is a number indicating how bad the model's prediction was on a single example.

If the model's prediction is perfect, the loss is zero; otherwise, the loss is greater.

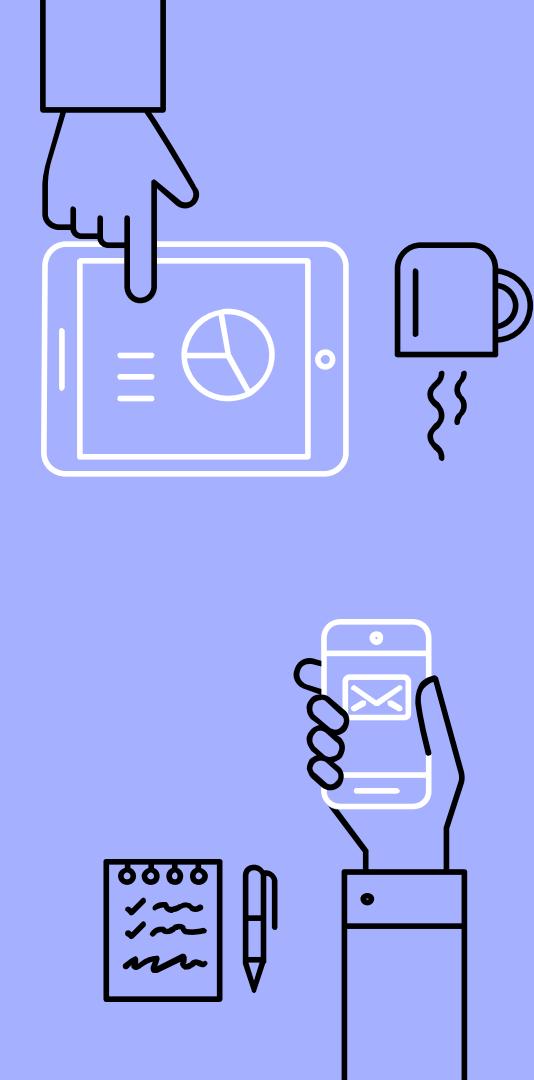


Types of Machine Learning

Supervised

Unsupervised

Reinforcement



LET'S know SOME CONCEPTS

Data exploration

is process of gathering information about a large and often unstructured data set

Data mining

refers to automated data exploration

Predictive analytics

is the process of building models from historical or current data in order to forecast future

Training data

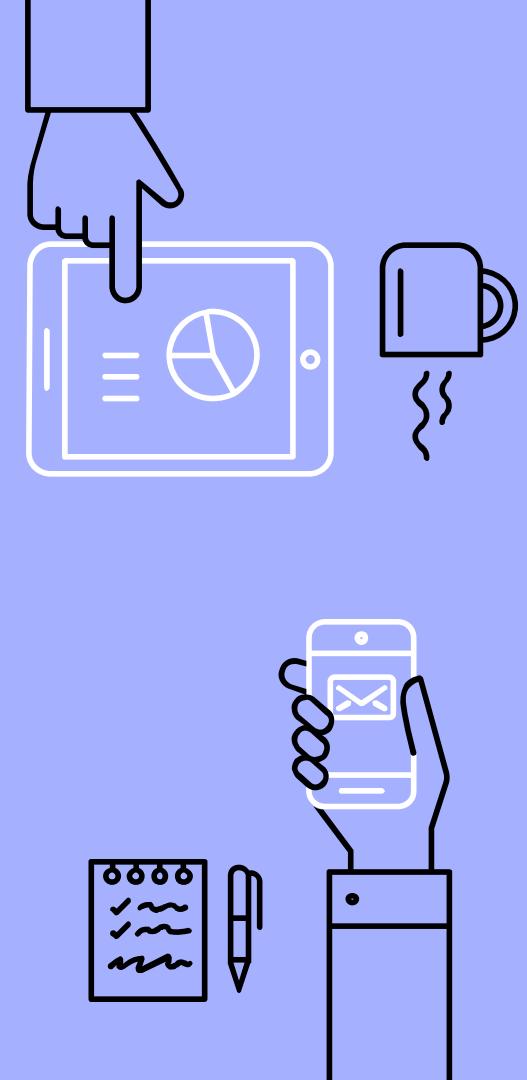
making adjustments to the model based on the data characteristics to get the most accurate answer.

Regression:

A model for predicting a value based on independent variables, such as predicting the price of a car based on its year and make.

Score

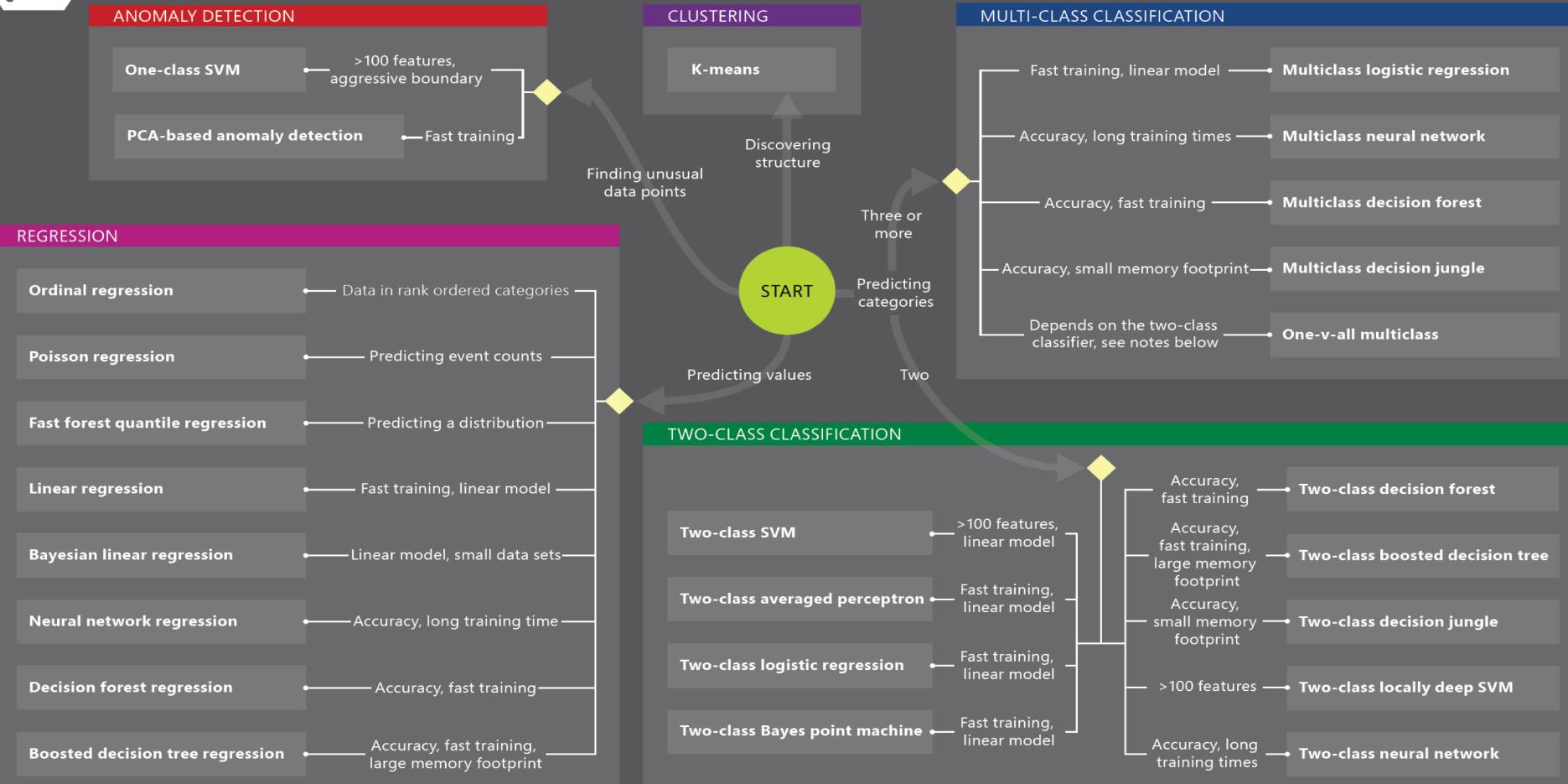
A predicted value generated from a trained classification or regression model

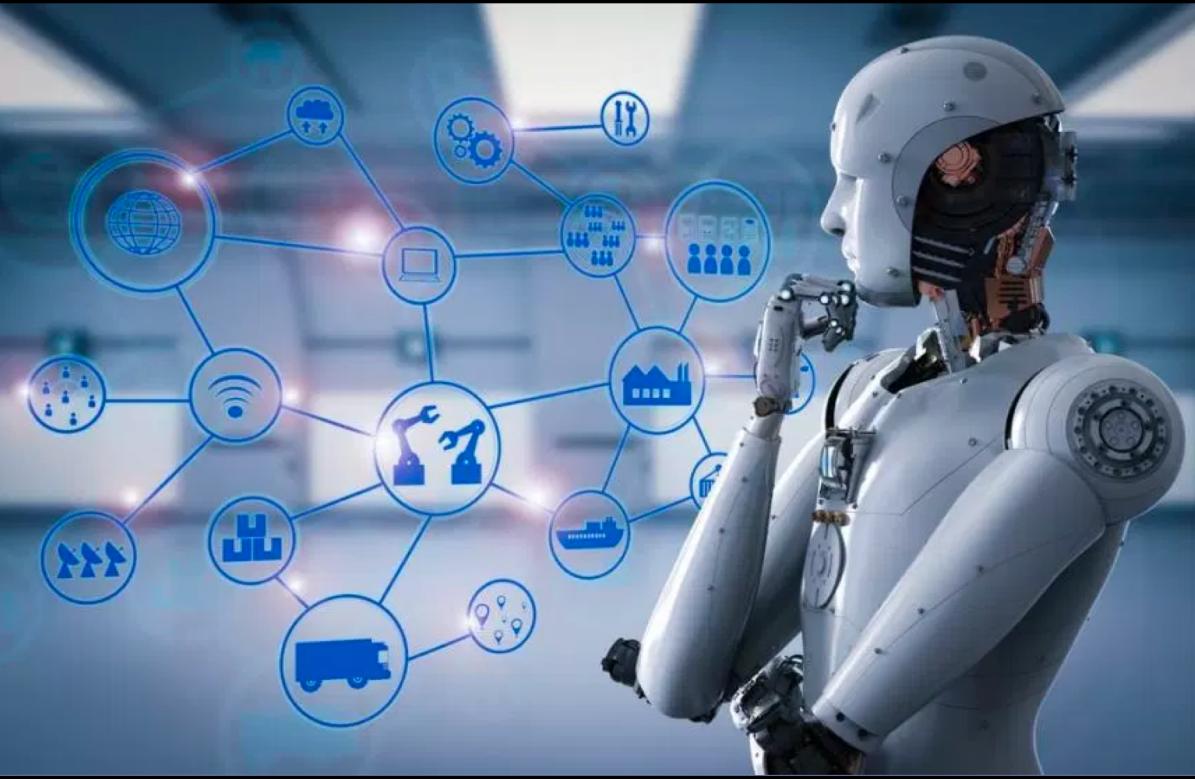




Microsoft Azure Machine Learning: Algorithm Cheat Sheet

This cheat sheet helps you choose the best Azure Machine Learning Studio algorithm for your predictive analytics solution. Your decision is driven by both the nature of your data and the question you're trying to answer.





Demo

THANKS!

Any questions?

You can find me at:

@AbhiForTweeting

abhishhek.msft@outlook.com

