

AI DEMO BATTERY RECOGNIZER

PRESENTED BY WING CHAN

AGENDA

- Al vs Machine Learning vs Deep Learning
- Azure Cognitive Services
- Demo
- Q&A

AI = THINKING MACHINE?



AI VS MACHINE LEARNING VS DEEP LEARNING

Artificial Intelligence

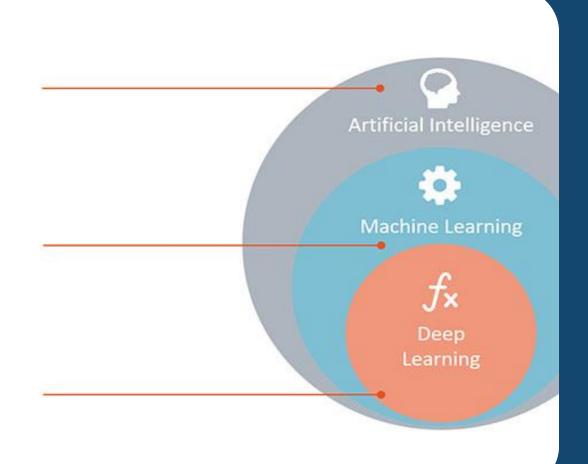
Any technique which enables computers to mimic human behavior.

Machine Learning

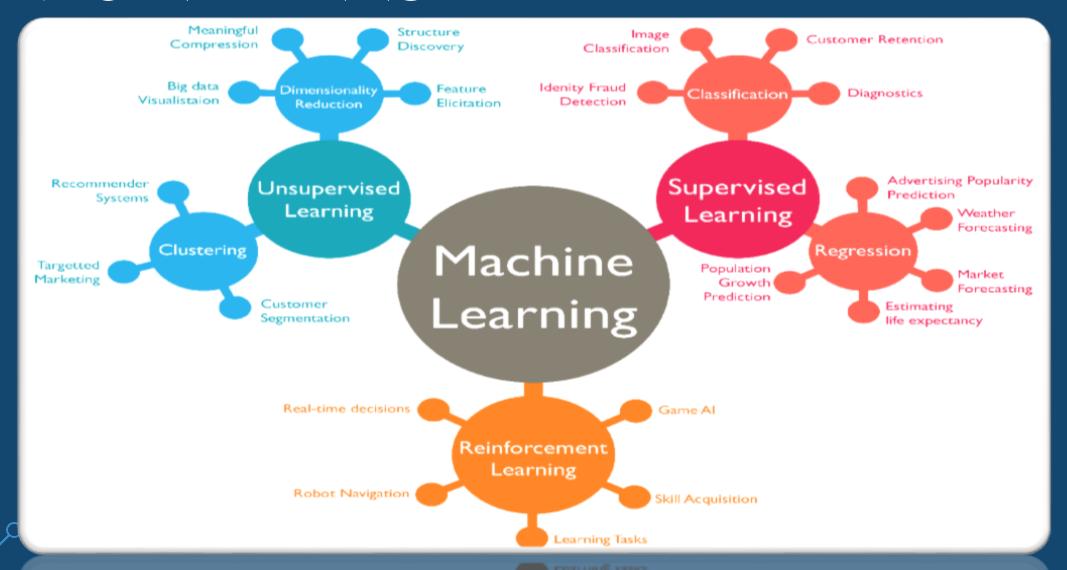
Subset of AI techniques which use statistical methods to enable machines to improve with experiences.

Deep Learning

Subset of ML which make the computation of multi-layer neural networks feasible.



MACHINE LEARNING



MACHINE LEARNING VS DEEP LEARNING

Machine Learning



Input





Feature extraction







Output

CAR **NOT CAR**

Deep Learning





Feature extraction + Classification



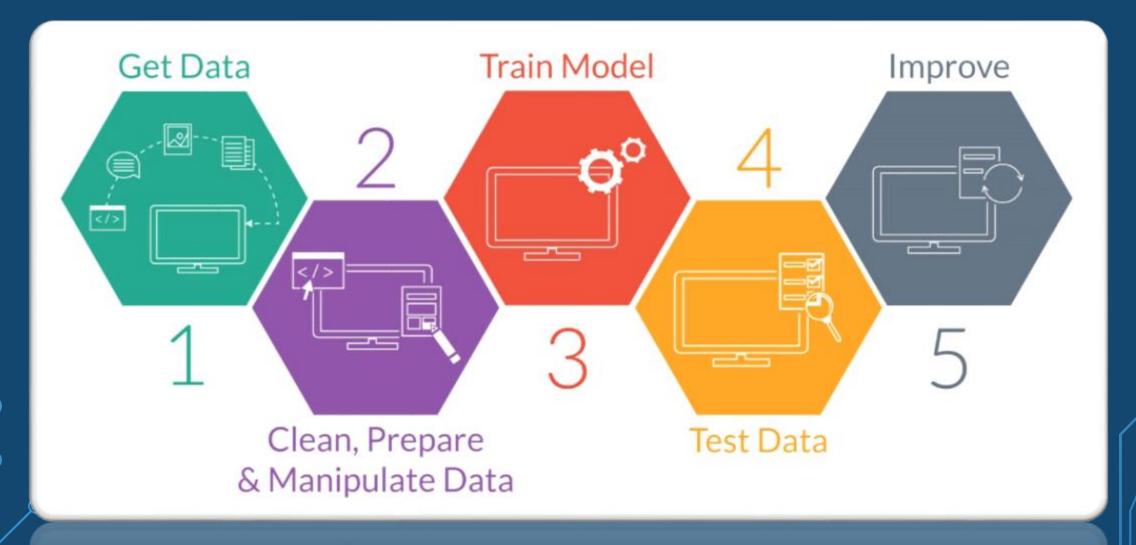
Output

CAR **NOT CAR**





MACHINE LEARNING WORKFLOW



AZURE COGNITIVE SERVICES

Vision

Image-processing algorithms to smartly identify, caption, index, and moderate your pictures and videos.

Speech

Convert spoken audio into text, use voice for verification, or add speaker recognition to your app.

Knowledge

Map complex information and data in order to solve tasks such as intelligent recommendations and semantic search.

Language

Allow your apps
to process natural
language with
pre-built scripts,
evaluate
sentiment and
learn how to
recognize what
users want.

Search

Add Bing Search
APIs to your apps
and harness the
ability to comb
billions of
webpages,
images, videos,
and news with a
single API call.



Training Use Your Export Classification Input data Setup Service Model Models Models • Upload Battery Create Custom Tags battery • Generate a Export CoreML • Embedded the trained model by exported models to your iOS and and TensorFlow Vision Service in **Images** images per Azure Cognitive battery model training model models for offline Android apps services types usage



QUESTIONS?

Demo App Source code

https://goo.gl/AcY2Qd