AI DEMO
BATTERY RECOGNIZER

PRESENTED BY WING CHAN

AGENDA

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

AI = THINKING MACHINE?

AI VS MACHINE LEARNING VS DEEP LEARNING

Artificial Intelligence

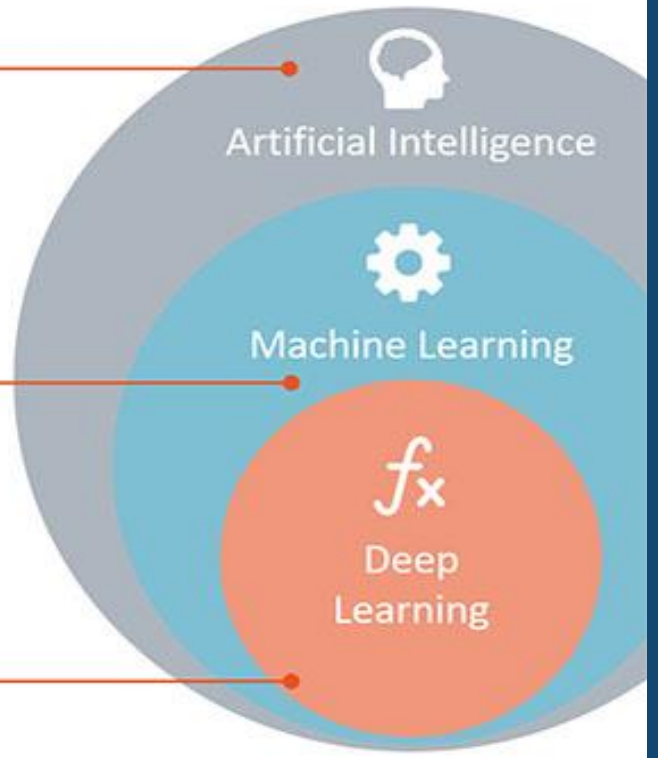
Any technique which enables computers to mimic human behavior.

Machine Learning

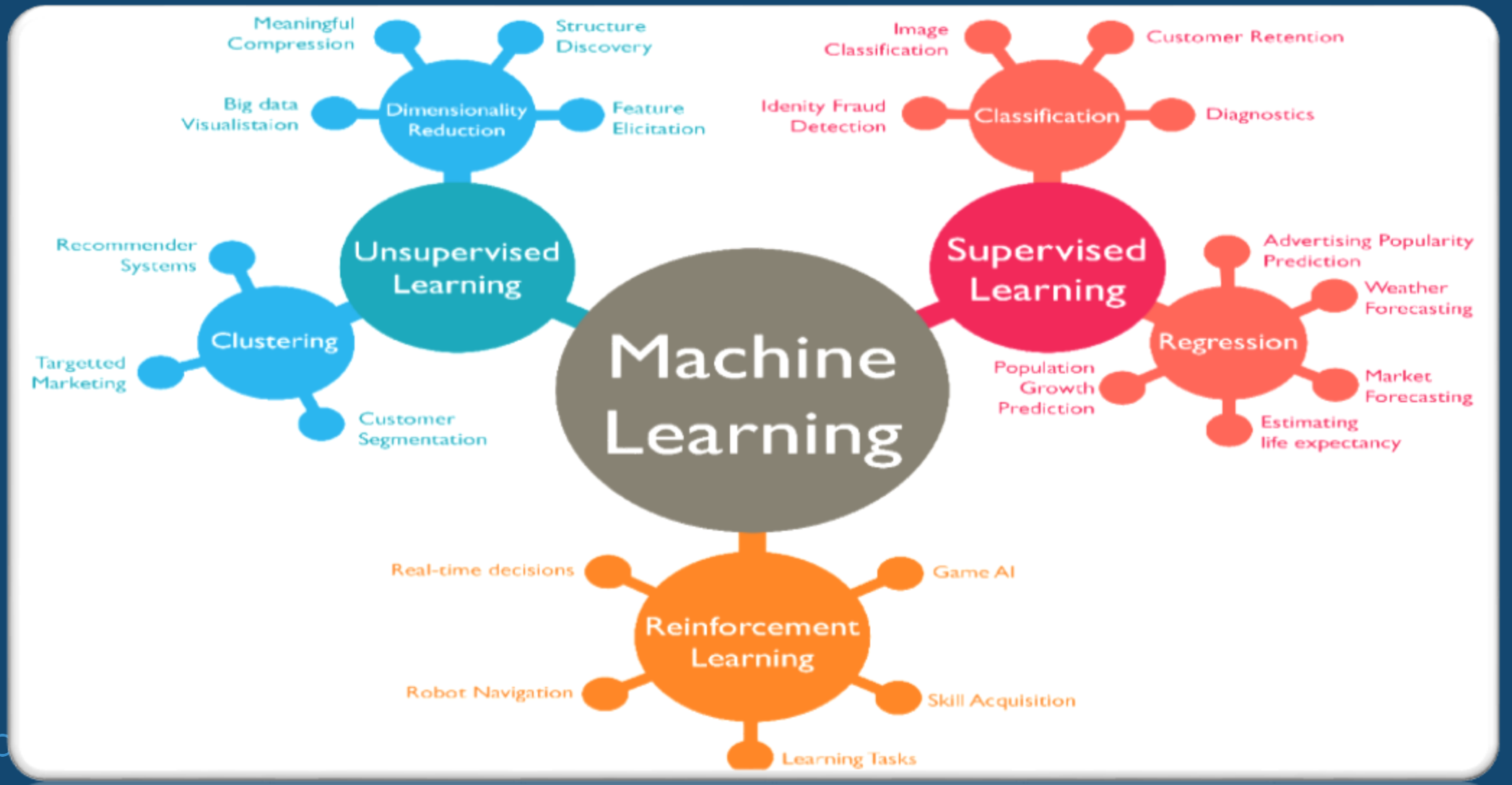
Subset of AI techniques which use statistical methods to enable machines to improve with experiences.

Deep Learning

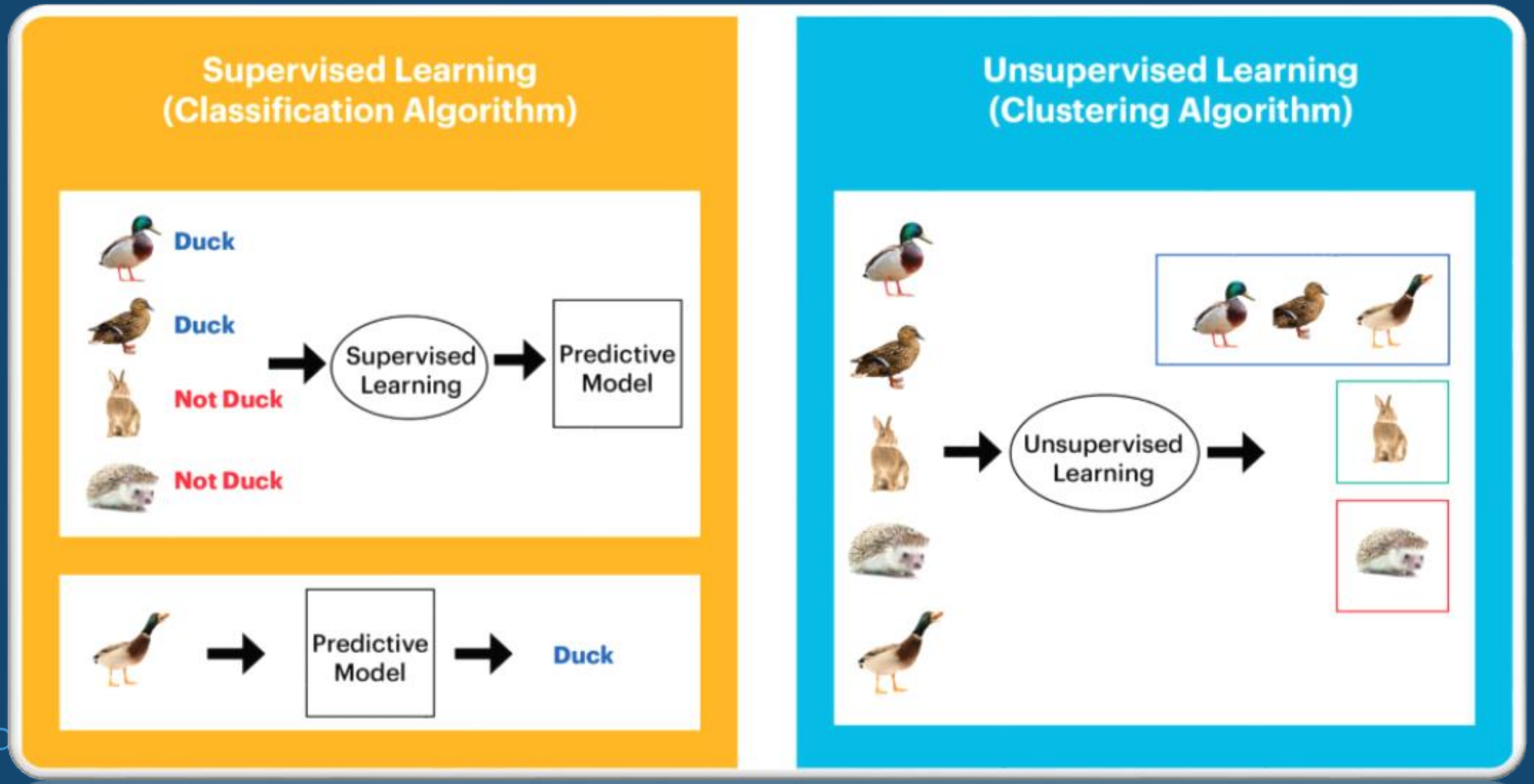
Subset of ML which make the computation of multi-layer neural networks feasible.



MACHINE LEARNING



SUPERVISED VS UNSUPERVISED



REINFORCEMENT LEARNING

MACHINE LEARNING VS DEEP LEARNING

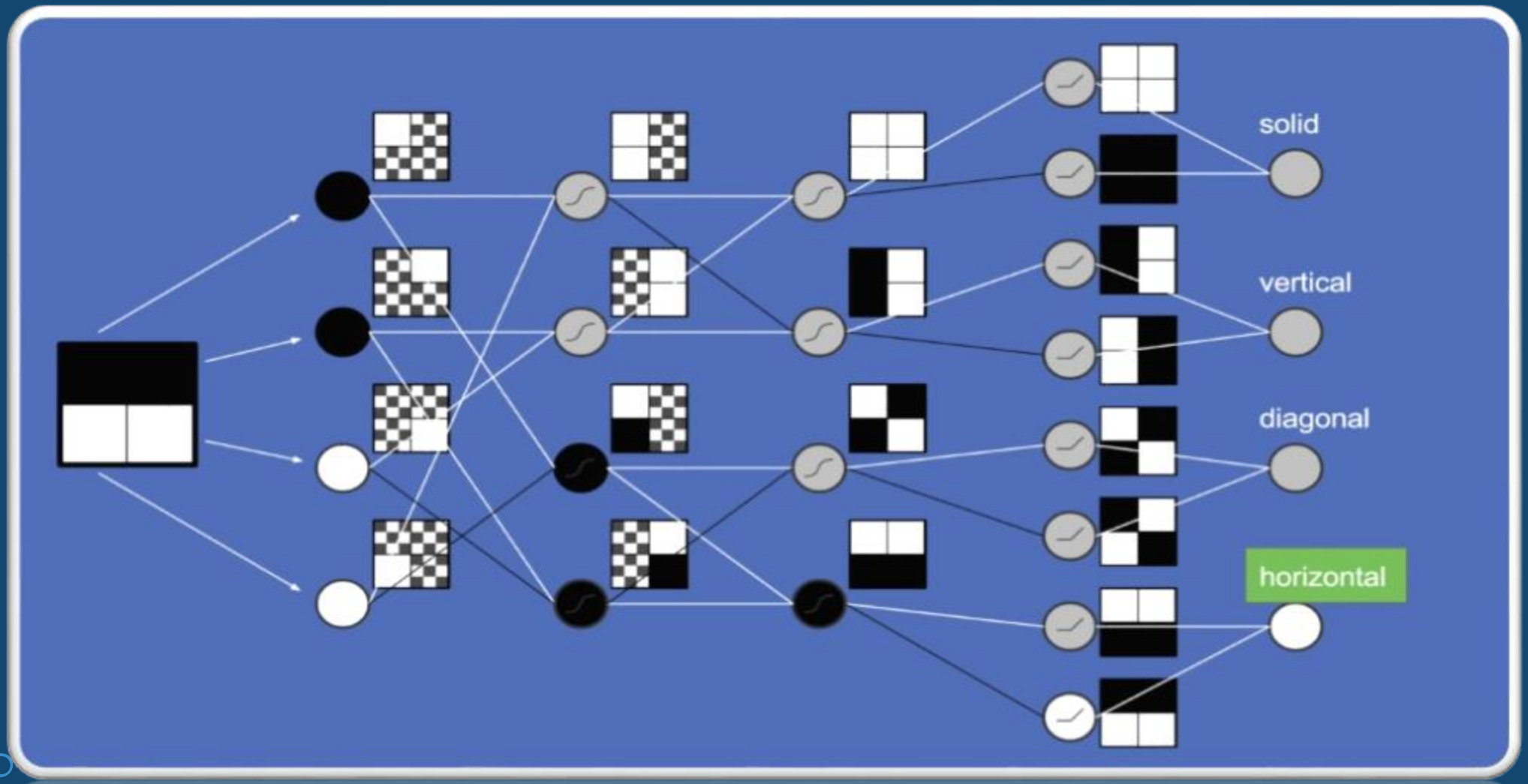
Machine Learning

Input → Feature extraction → Classification → Output

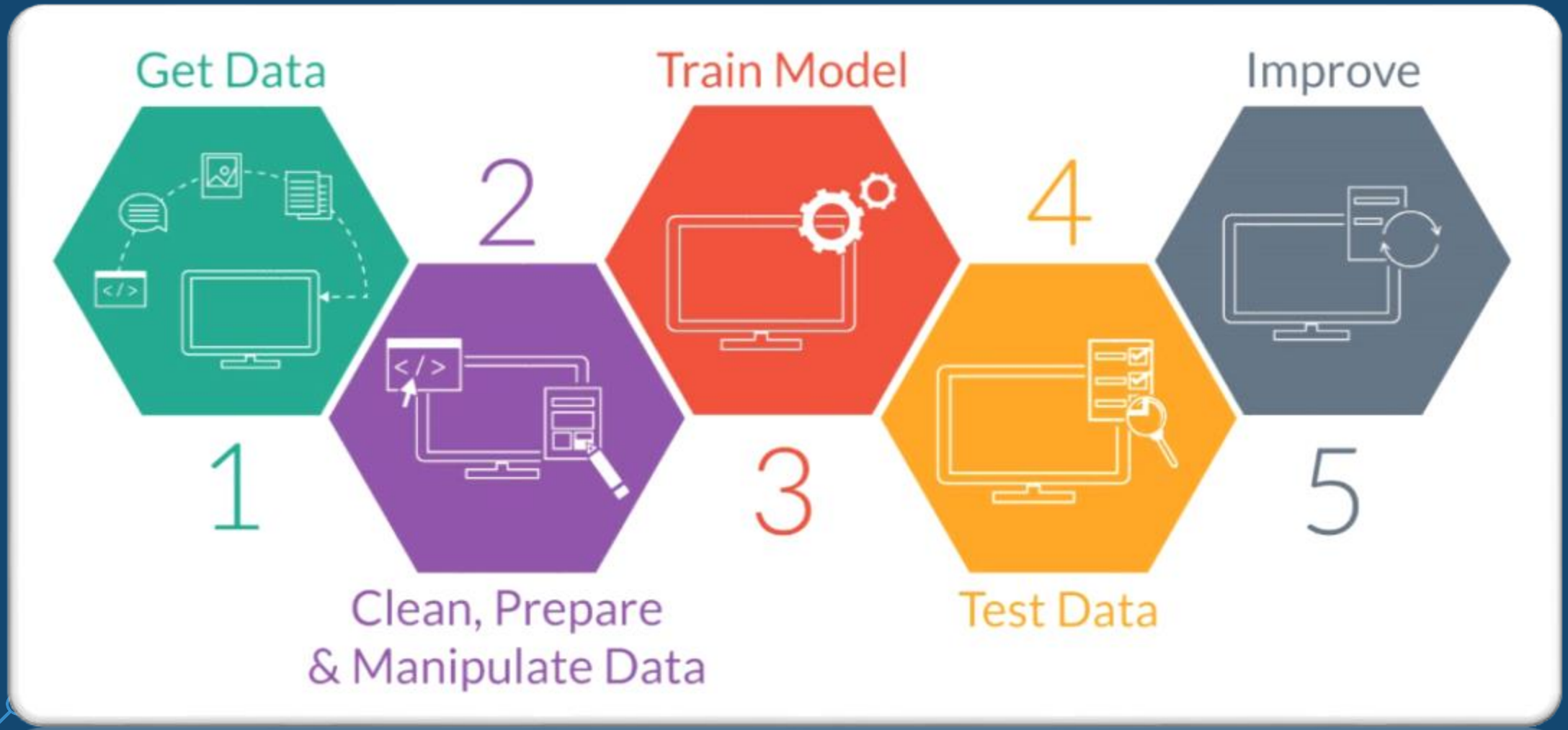
Deep Learning

Input → Feature extraction + Classification → Output

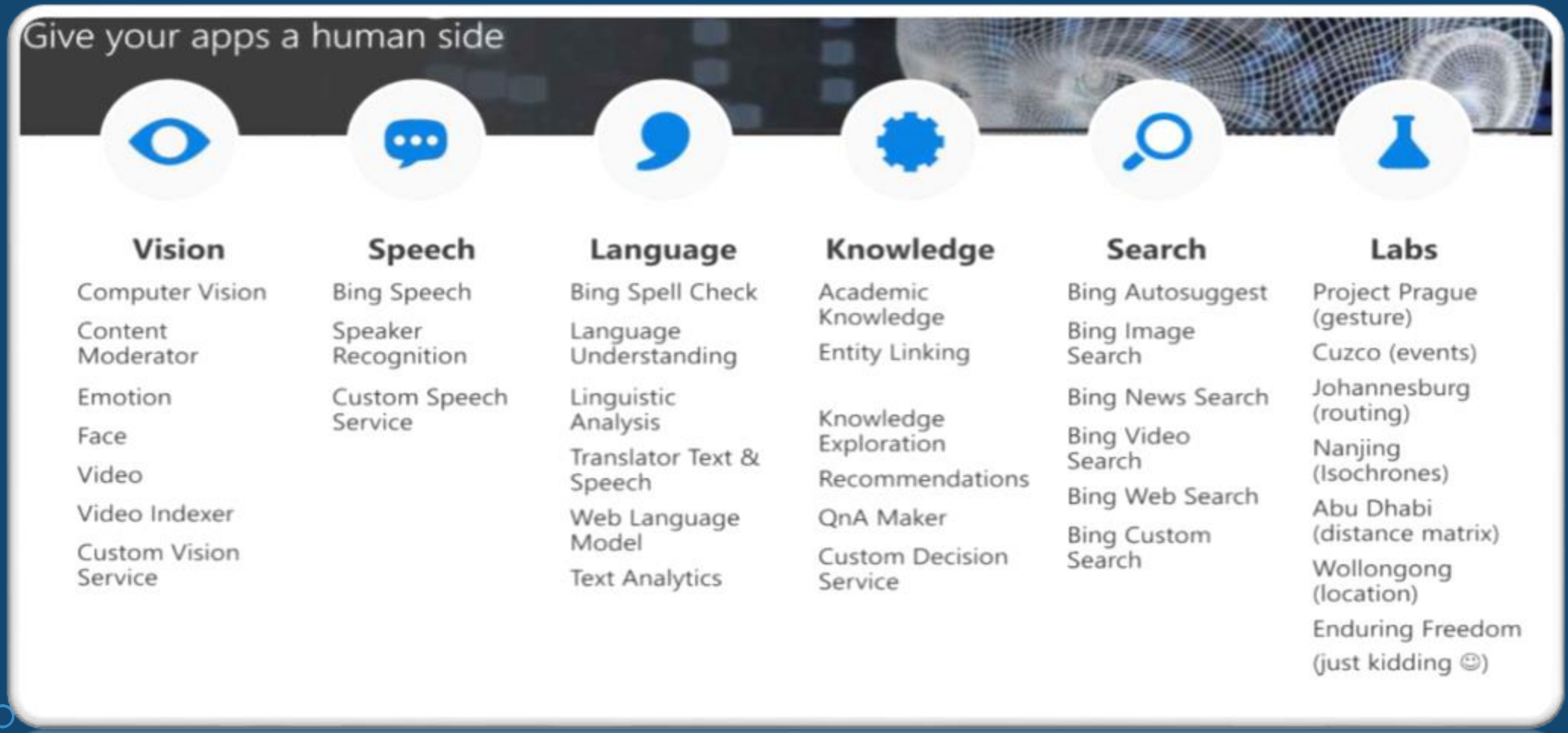
NEURAL NETWORK IN DEEP LEARNING



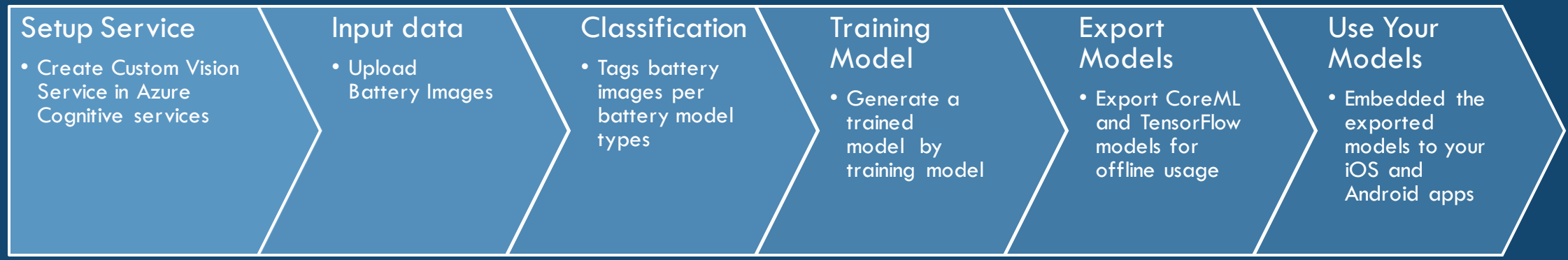
MACHINE LEARNING WORKFLOW



AZURE COGNITIVE SERVICES



DEMO


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

QUESTIONS?

Demo App Source code

https://goo.gl/AcY2Qd