Machine Learning 기초 이론부터 Azure ML Studio 사용 실

1. Machine Learning 개념

권예진 · 동덕여자대학교
Microsoft Student Partner

Microsoft

CONTENTS

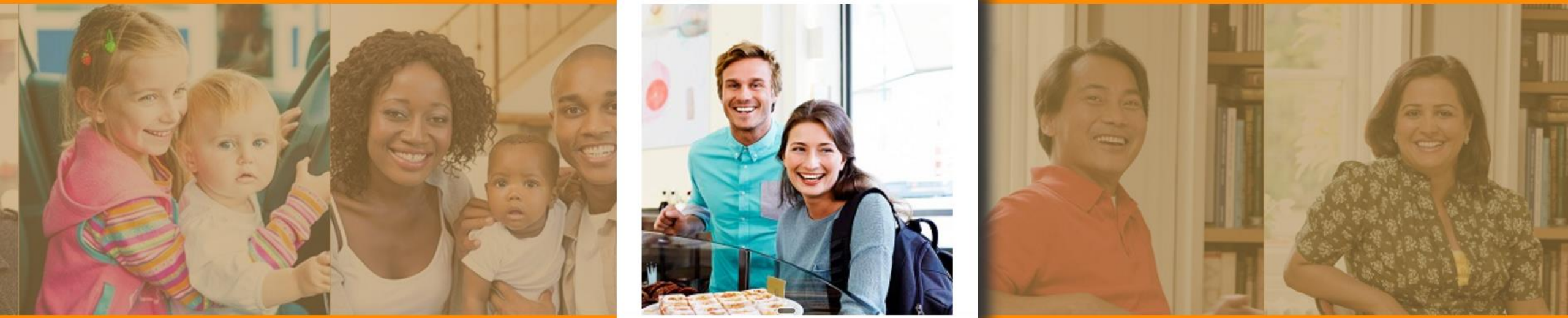
Microsoft

1. Cognitive Service

How-Old.net

How old do I look? #HowOldRobot

Search Faces...



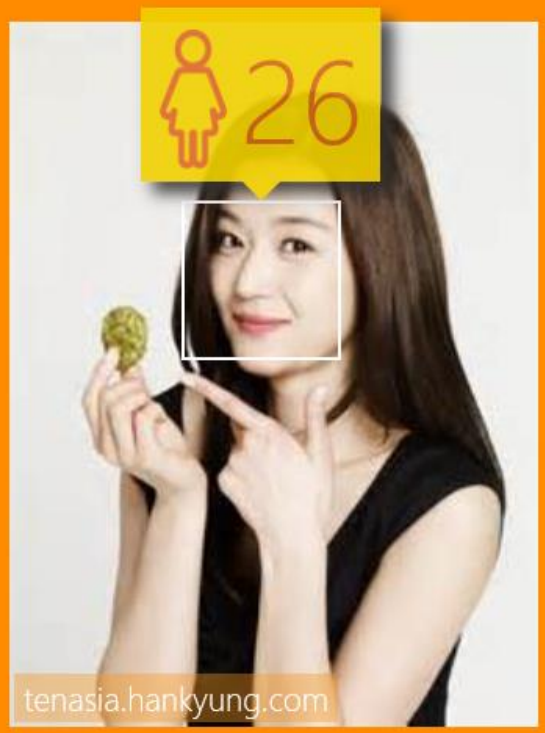
Use this photo

Use your own photo

Microsoft

How-Old.net

How old do I look? #HowOldRobot



Sorry if we didn't quite get it right - we are still improving this feature..

Try Another Photo!

Microsoft

TwinsOrNot.net

Are you twins? #TwinsOrNotRobot

Step 1: Click to add a pic

P.S. We'll only use your photos for the game unless you say we can keep them to improve. Learn more

Find out more about TwinsOrNot.Net

Powered by Microsoft "Project Oxford"

Microsoft

CelebsLike.Me

Which celebrity do you look like?

Search the web for faces...

USE THIS PHOTO

USE YOUR OWN PHOTO

Your photos, but no personal info, may be used to improve matches.

Microsoft

Cognitive Services

https://aka.ms/cognitive

Cognitive Services

Microsoft

Vision	Speech	Language	Knowledge	Search
Computer Vision	Custom Recognition	Bing Spell Check	Academic Knowledge	Bing Web Search
Emotion	Speaker Recognition	Linguistic Analysis	Entity Linking	Bing Image Search
Face	Speech	Language Understanding	Knowledge Exploration	Bing Video Search
Video	Translator	Text Analytics	Recommendations	Bing News Search
		WebLM		Bing Autosuggest

2. Machine Learning

AlphaGo

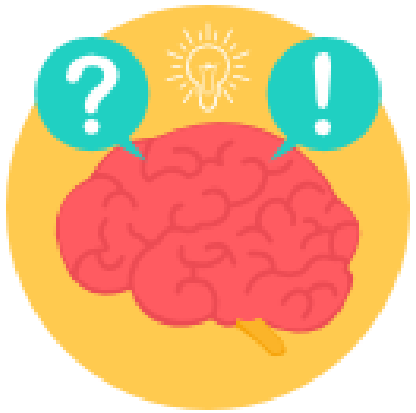
Machine Learning

- AlphaGo
- Machine Learning

Machine Learning

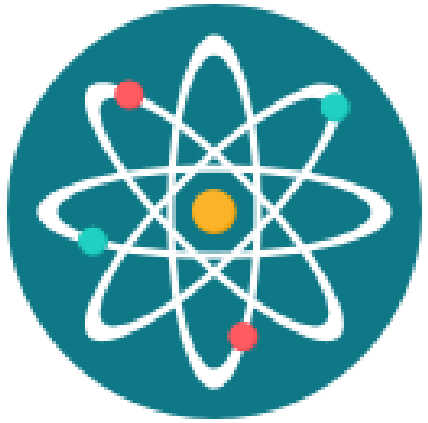
컴퓨터 성능의 발전

컴퓨터 성능과
뉴럴 네트워크의
시너지 효과



Deep Learning

샐로우 러닝
딥 러닝



Big data

정보의 활용

Microsoft

Data mining

Shallow learning

Deep Learning

Intelligence app

Neural Network

Big Data

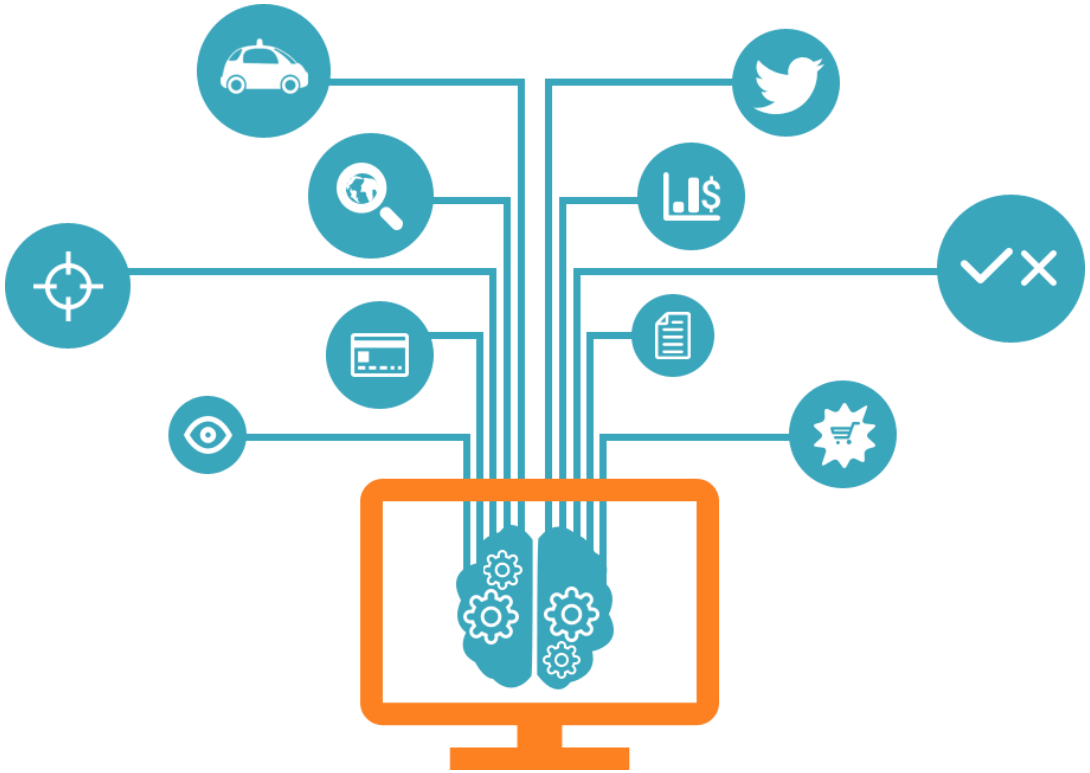
Classification

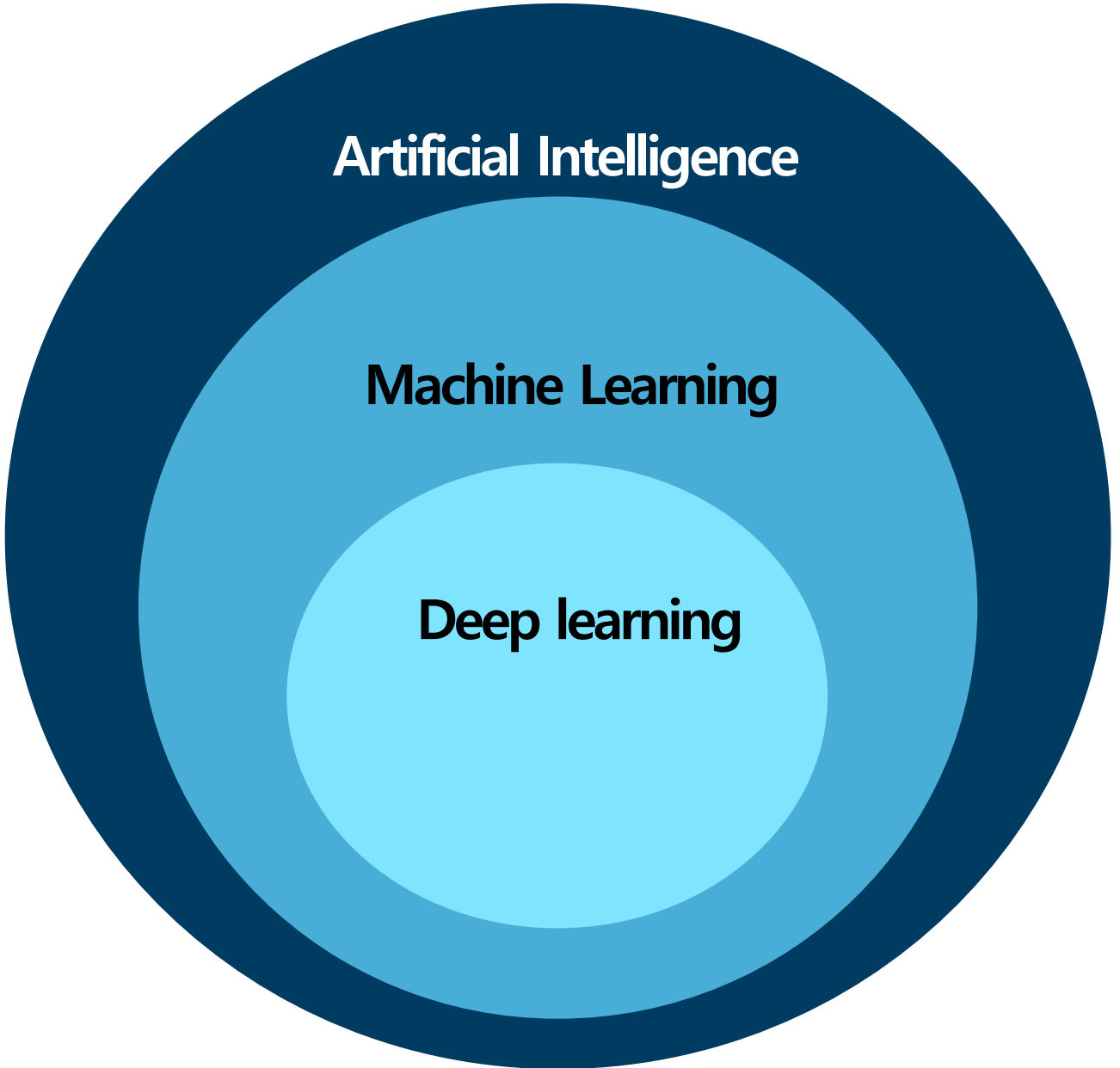
Machine Learning

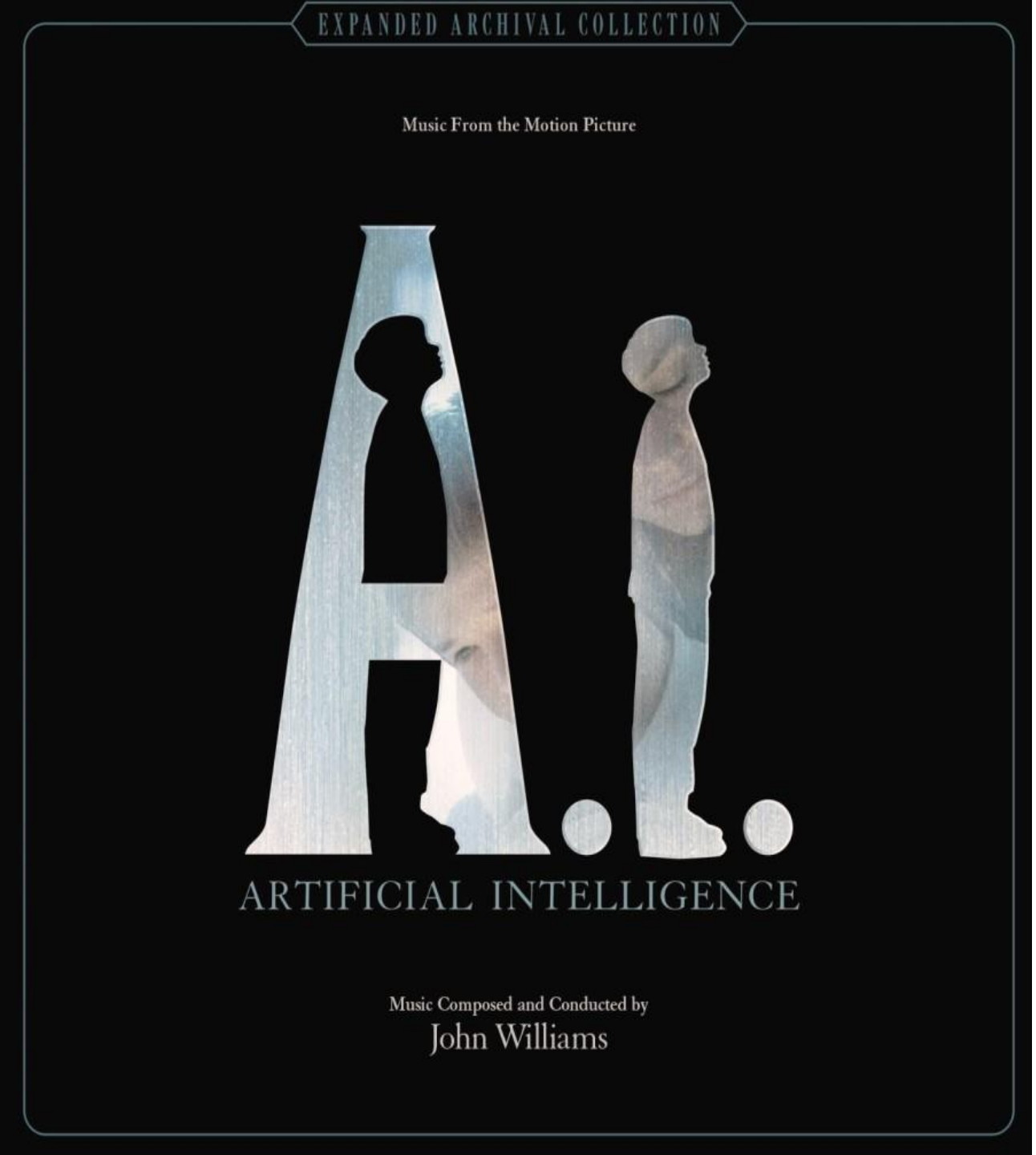
Artificial Intelligence

Cognitive service

AI vs Machine Learning vs Deep Learning

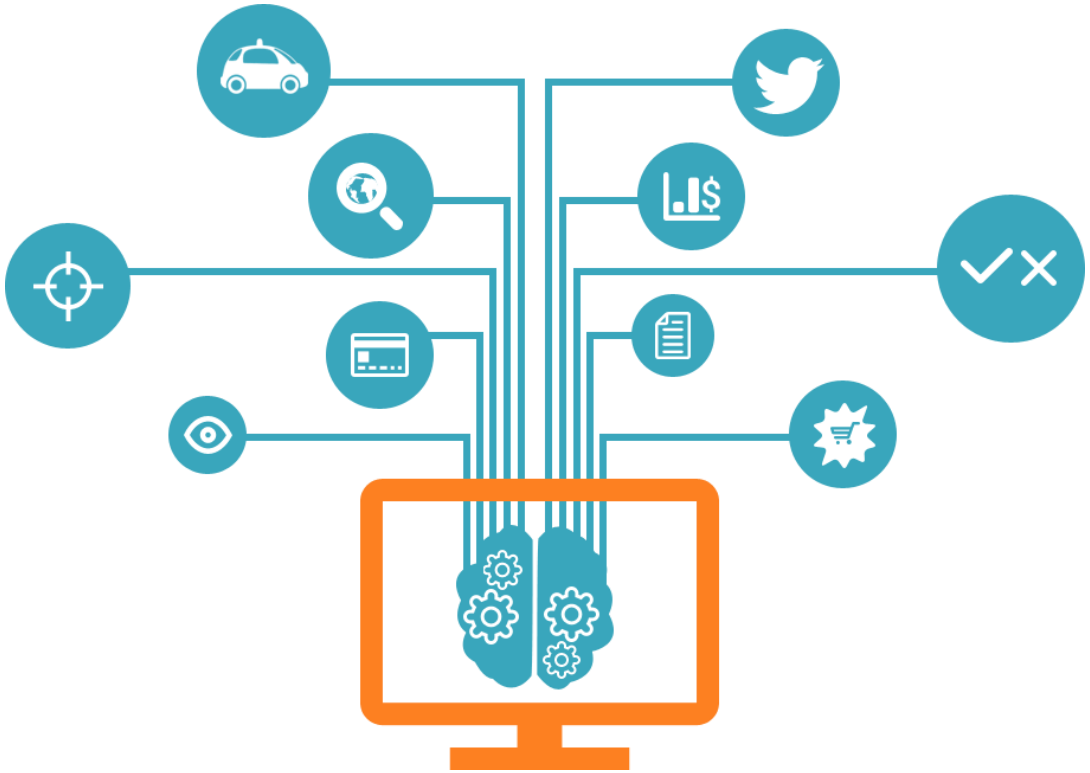


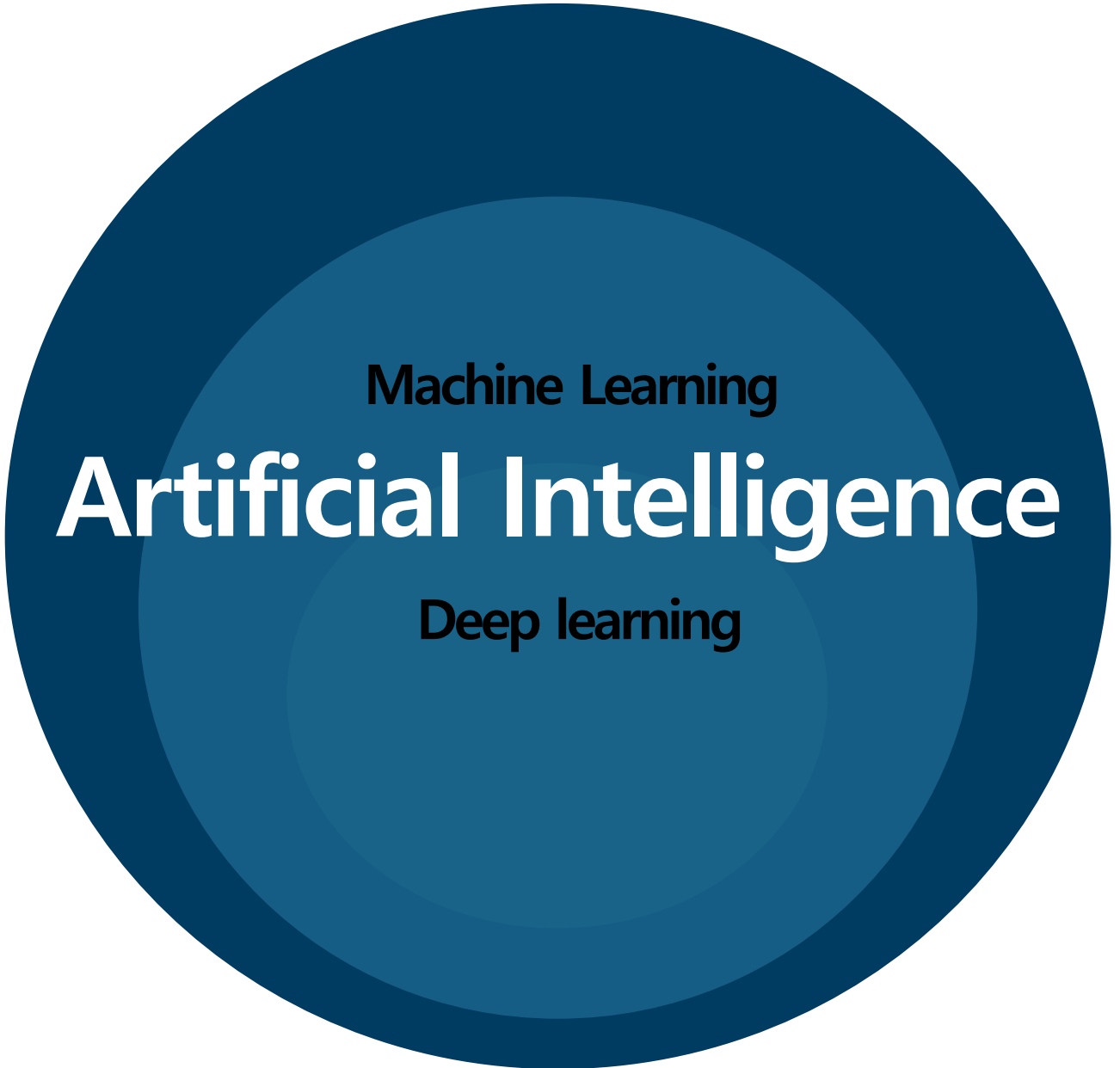




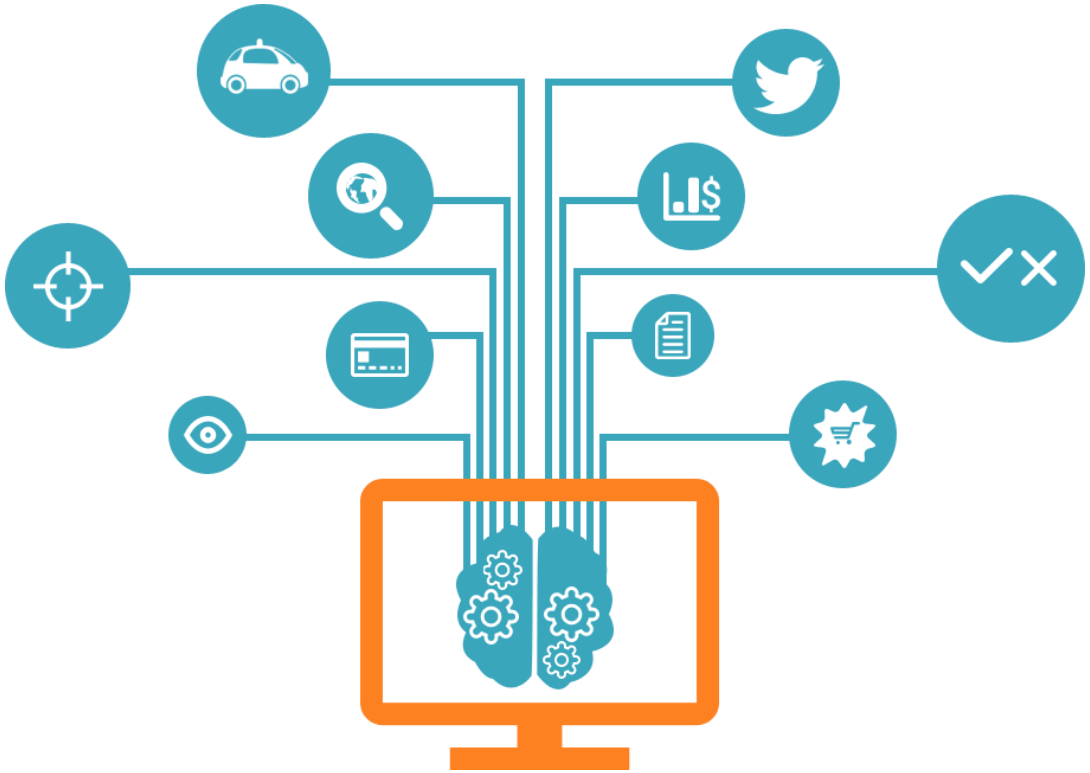
Artificial Intelligence

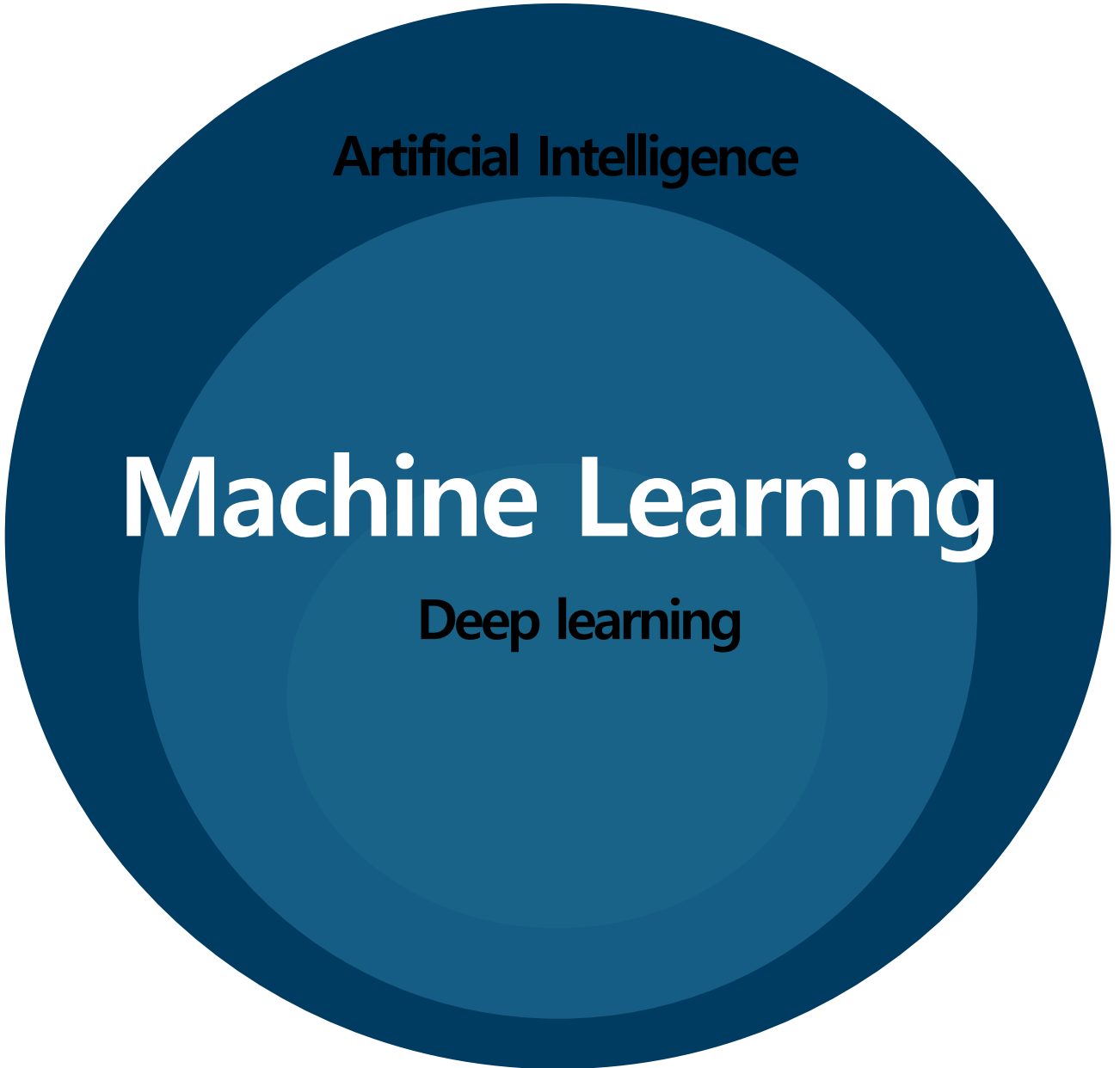
AI vs Machine Learning vs Deep Learning





AI vs Machine Learning vs Deep Learning





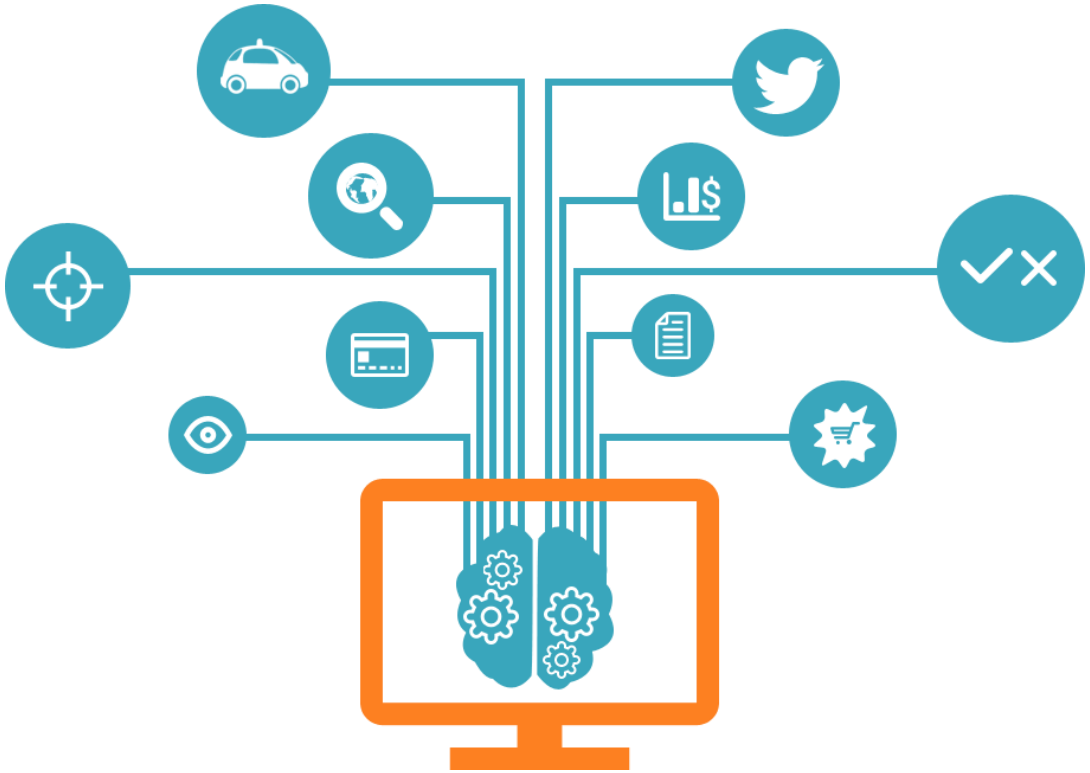
Machine Learning

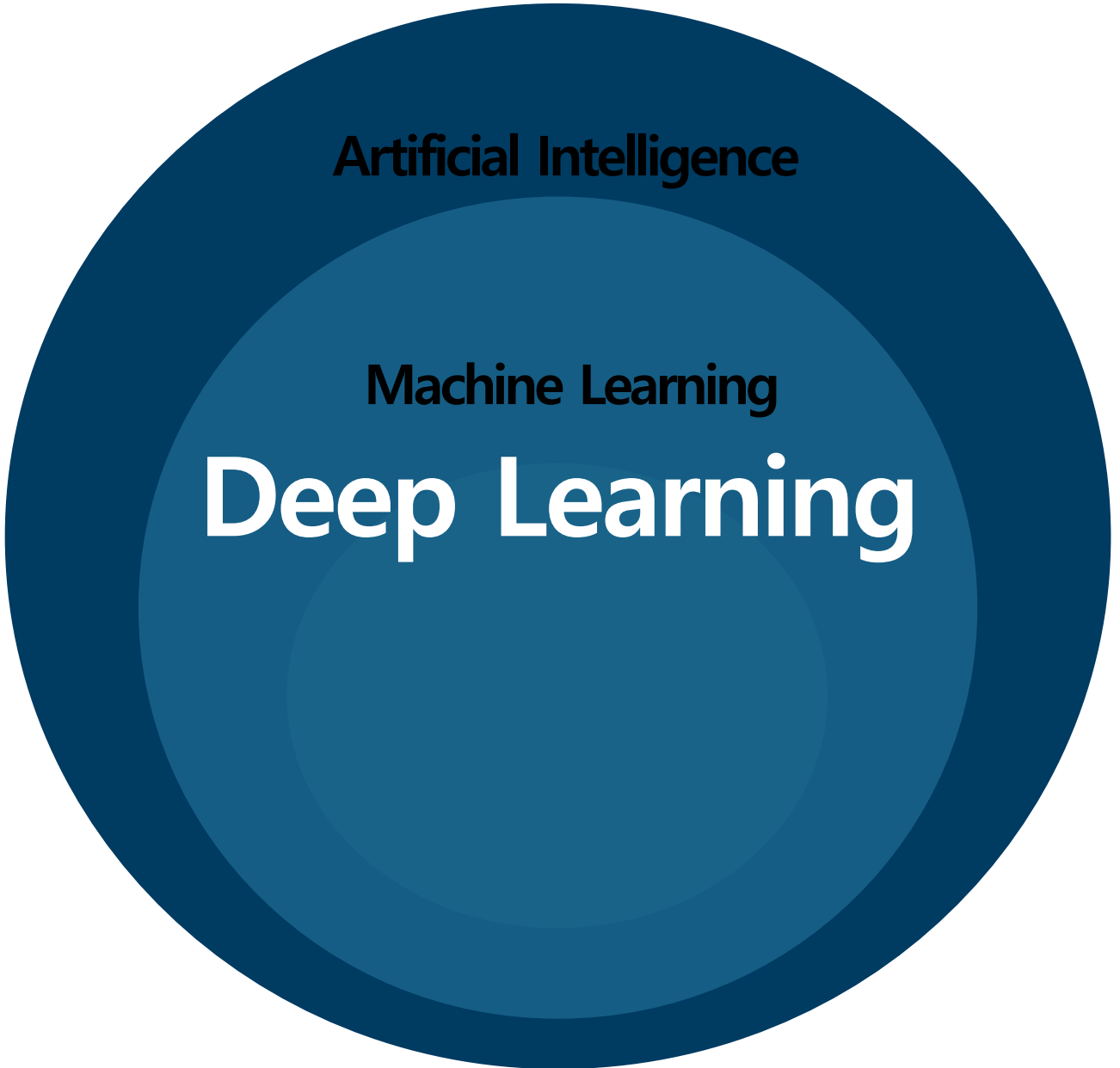




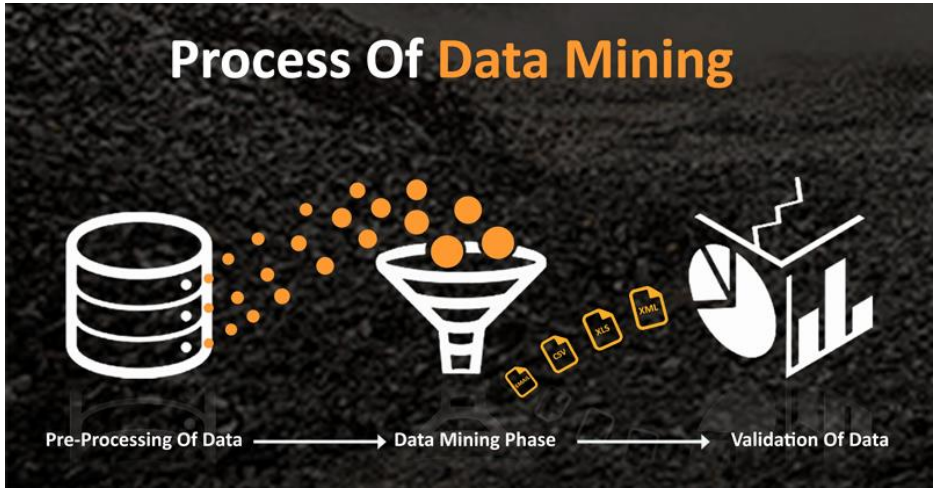


AI vs Machine Learning vs Deep Learning





Data mining



Data Mining

Data mining vs machine Learning

Data mining

WHAT

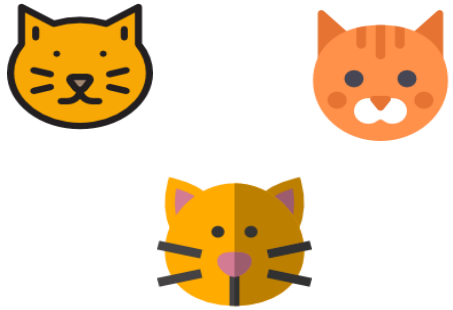
Machine Learning

HOW

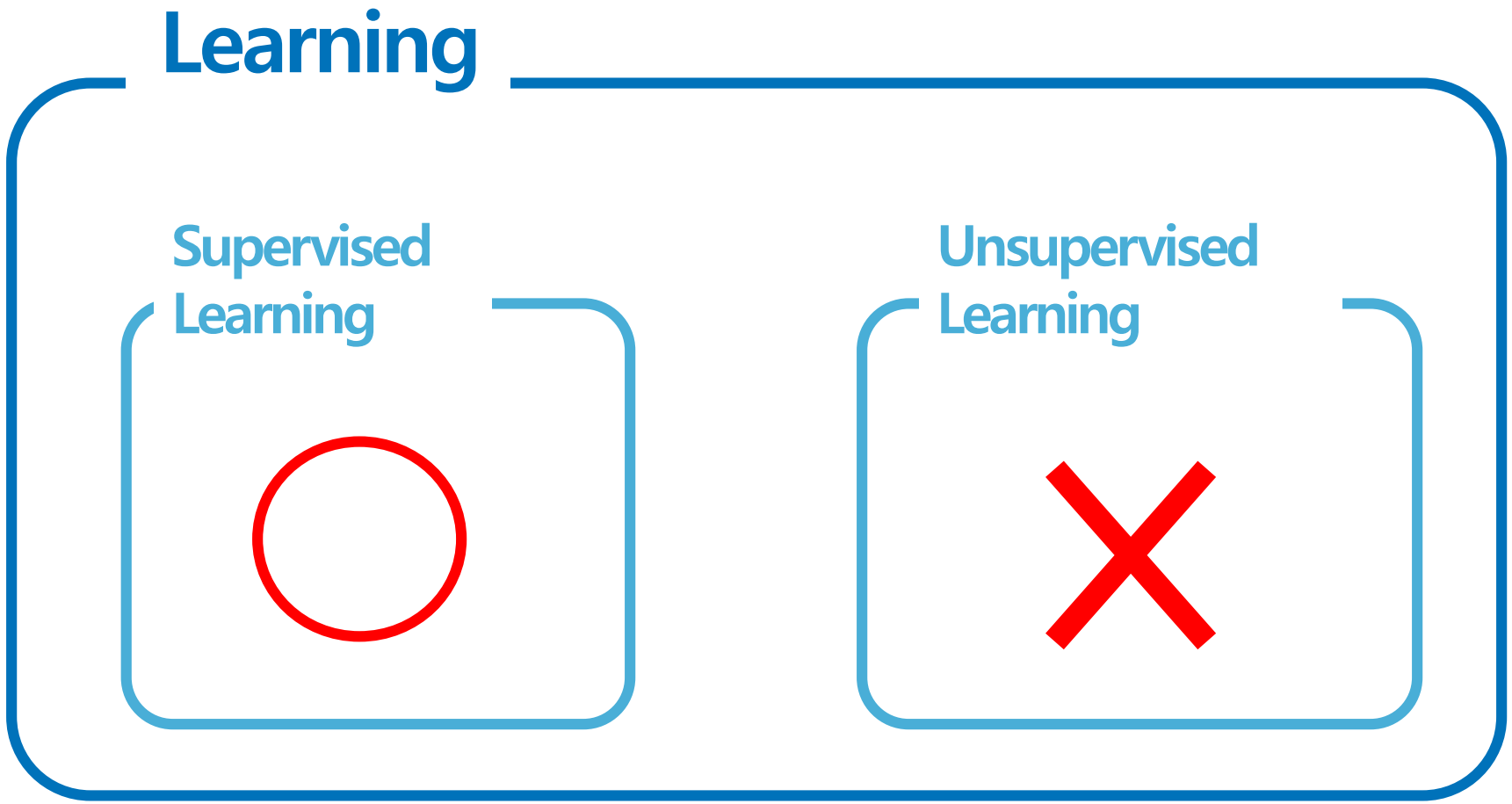
3.
What is Learning?

What is Learning?

- learning



What is Learning?



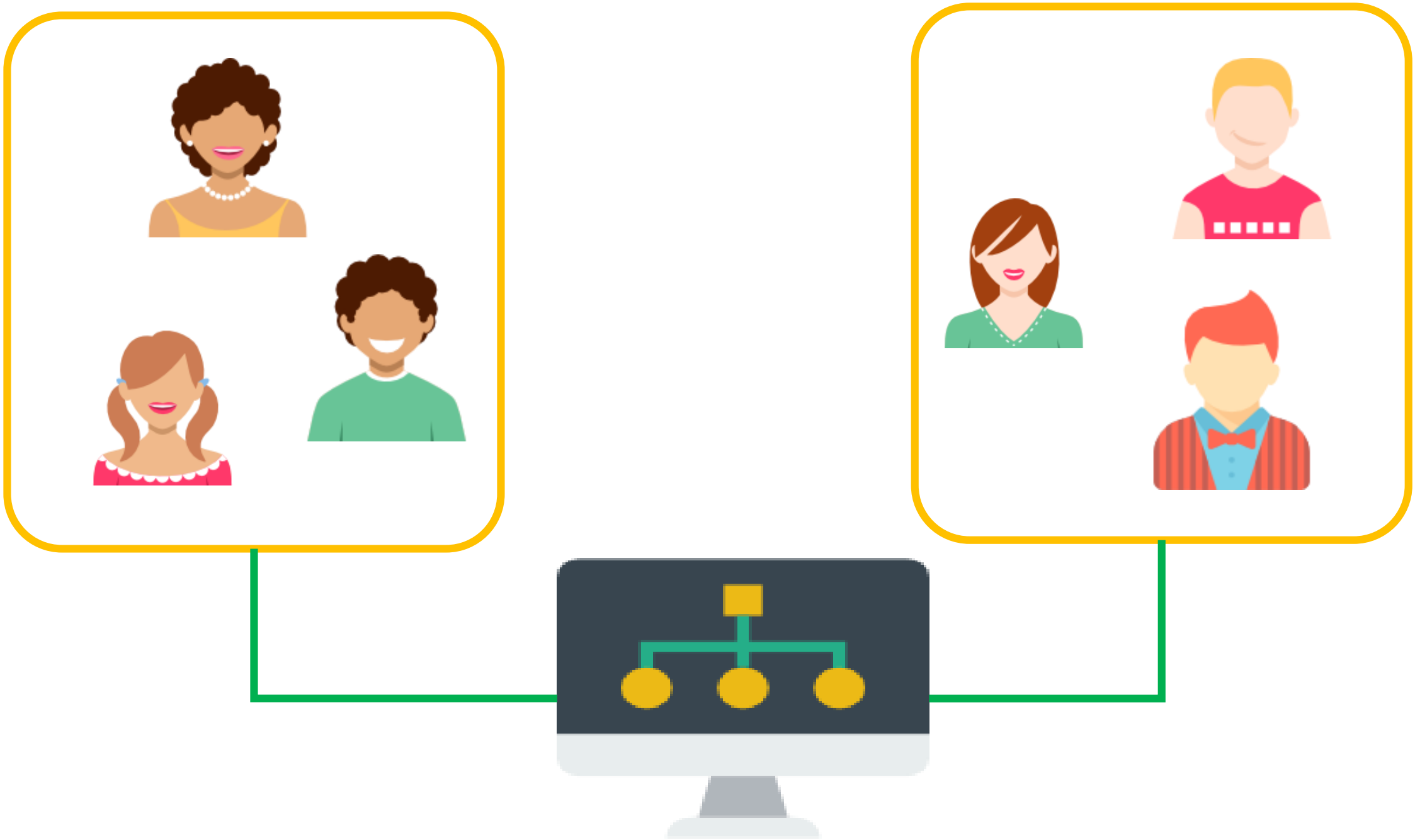
Supervised Learning

Supervised Learning

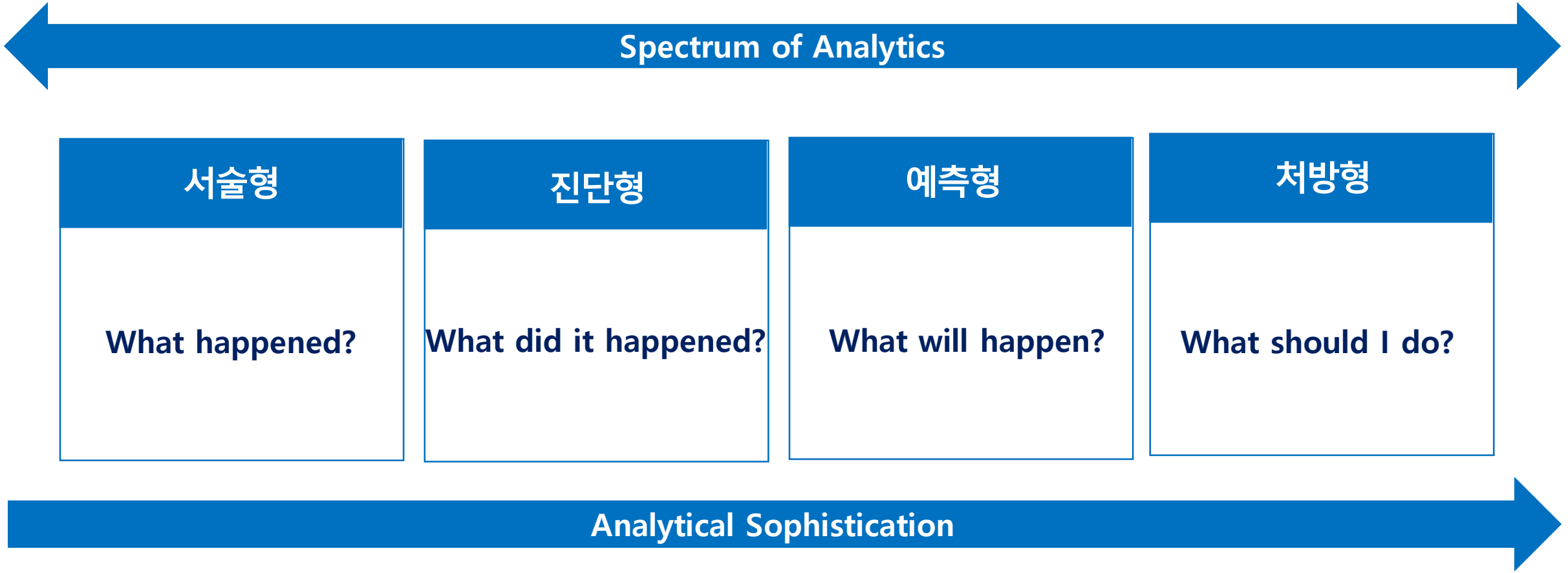
Dog? Cat?

예측시험

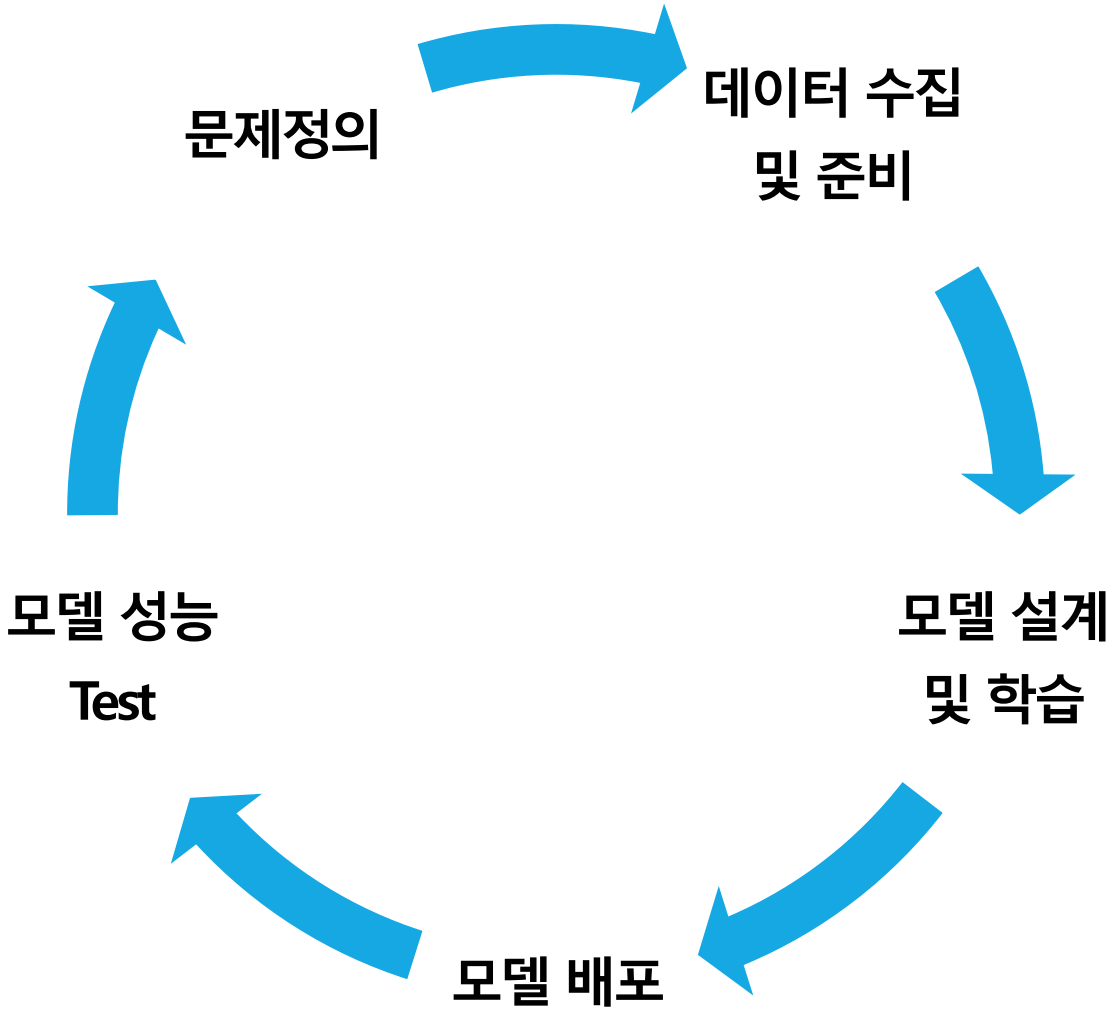
이미지 레이블링



Machine Learning Spectrum of Analytics



Machine Learning Process Loop



4. Machine Learning Model

Machine Learning Model

- 머신러닝
  - 지도학습 (Supervised Learning)
    - 분류모델 (Classification)
      - KNN
      - 의사결정트리
      - 서포트벡터머신
    - 예측모델 (회귀모델-Regression)
  - 비지도학습 (Unsupervised Learning)
    - 군집모델(Clustering)

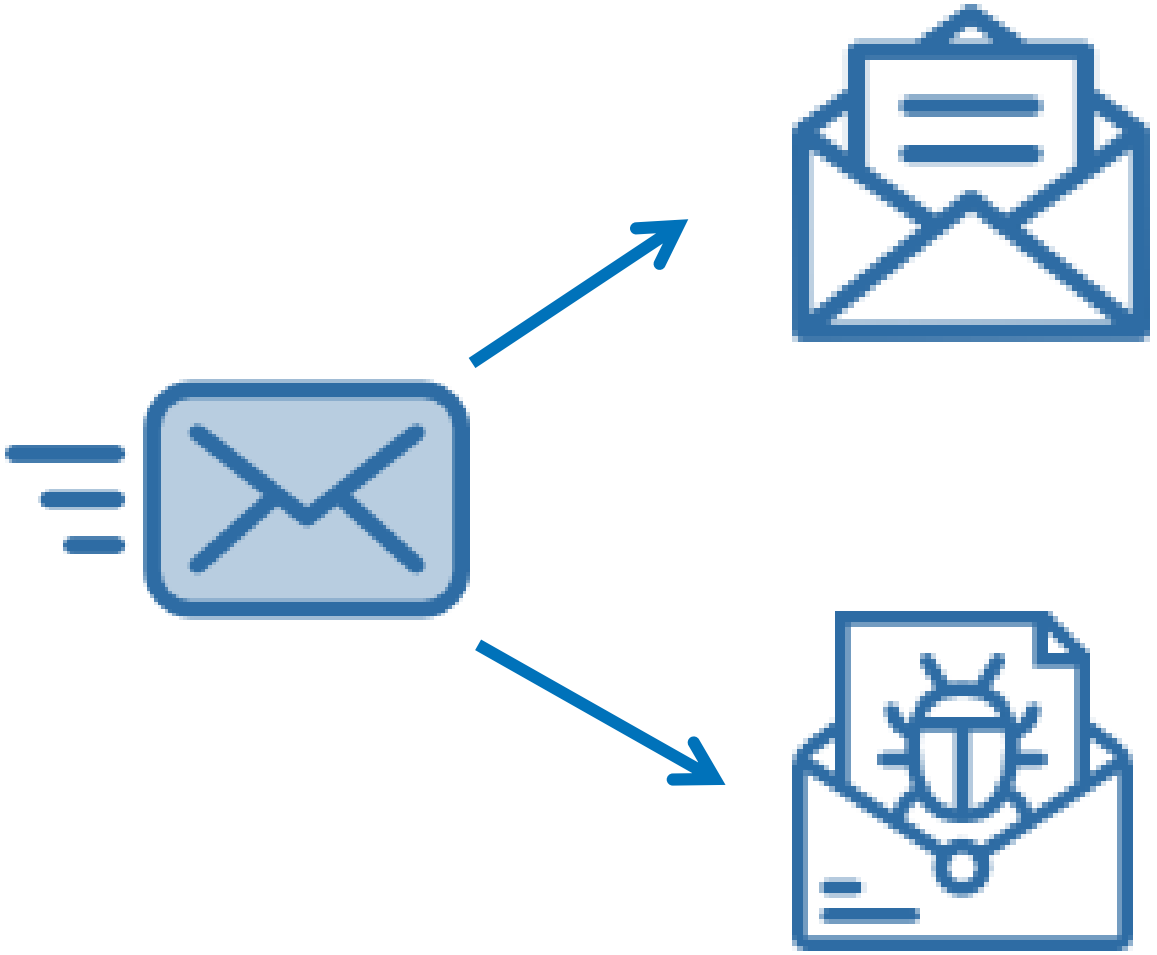
Supervised Learning

Score	Grade
Upper 85	A Grade
Upper 70	B Grade
Upper 50	C Grade

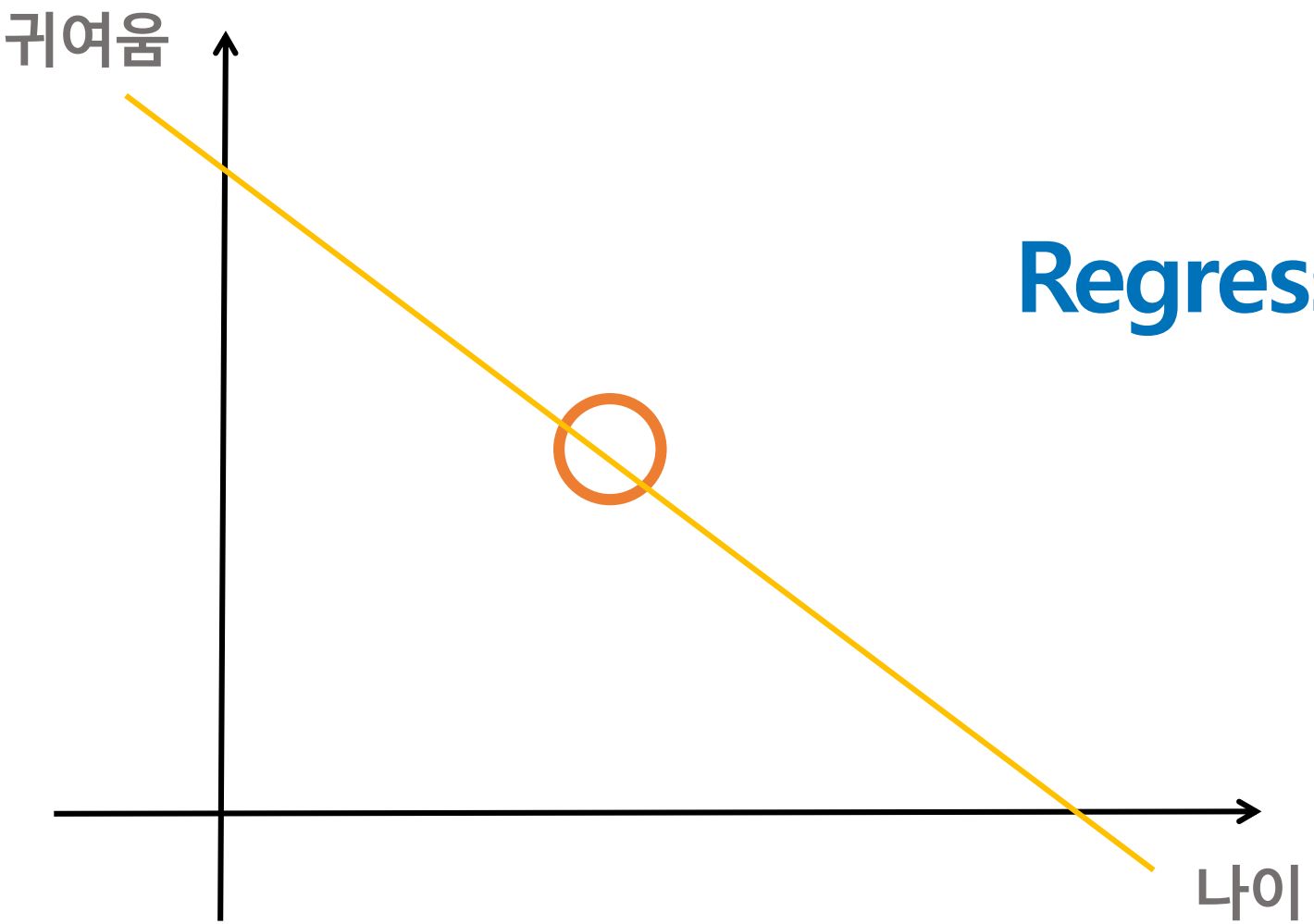
Classification Model

Supervised Learning

Classfication Model



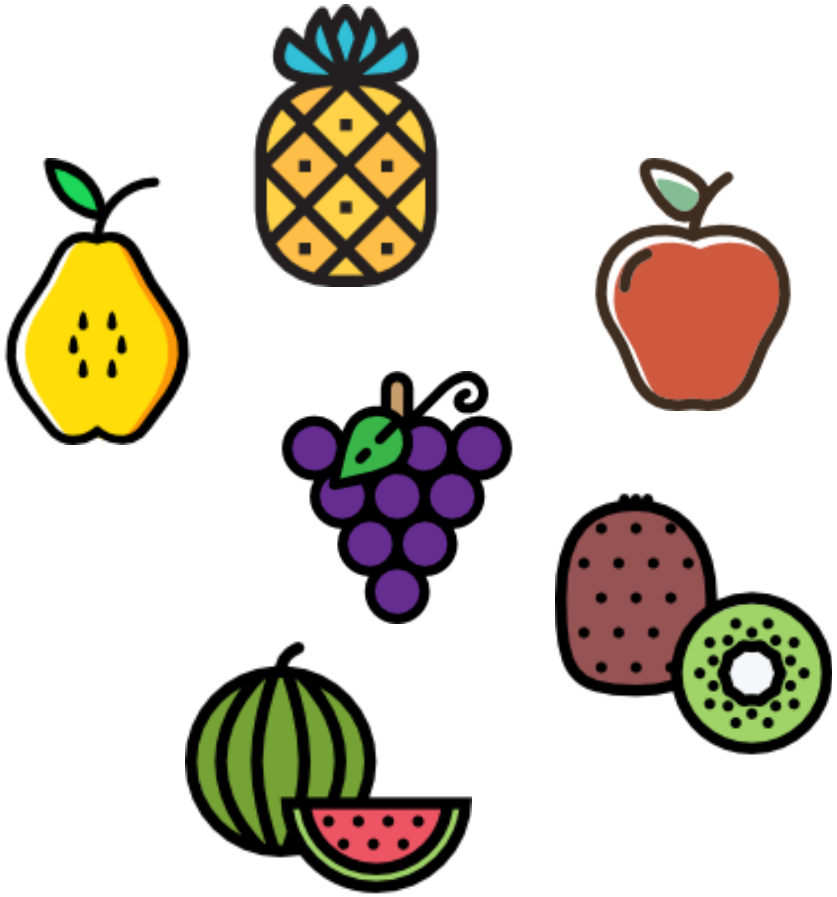
Supervised Learning



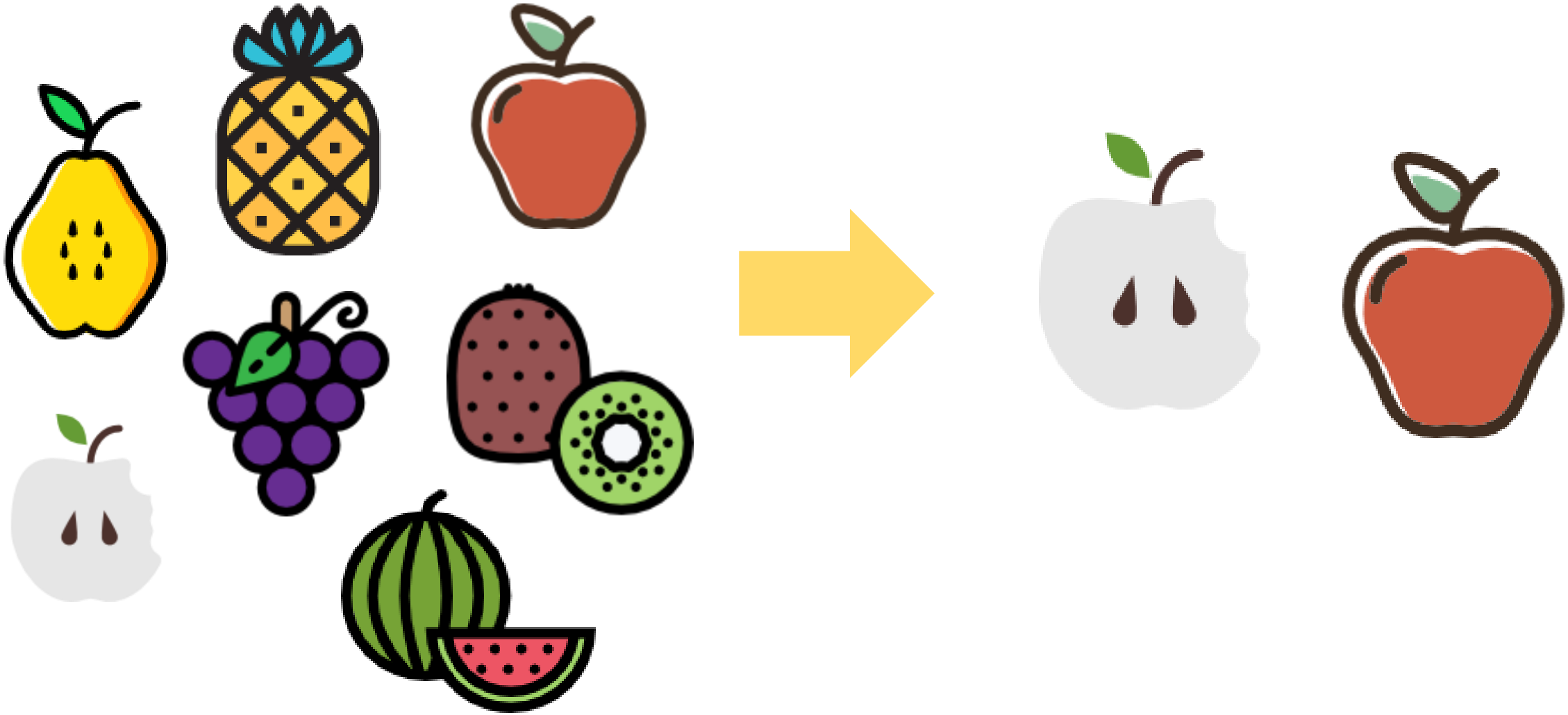
Regression Model

Supervised Learning

Classification	Regression
데이터 레이블 고정	데이터 세트로 결정한 함수식
Supervised Learning	



Supervised Learning

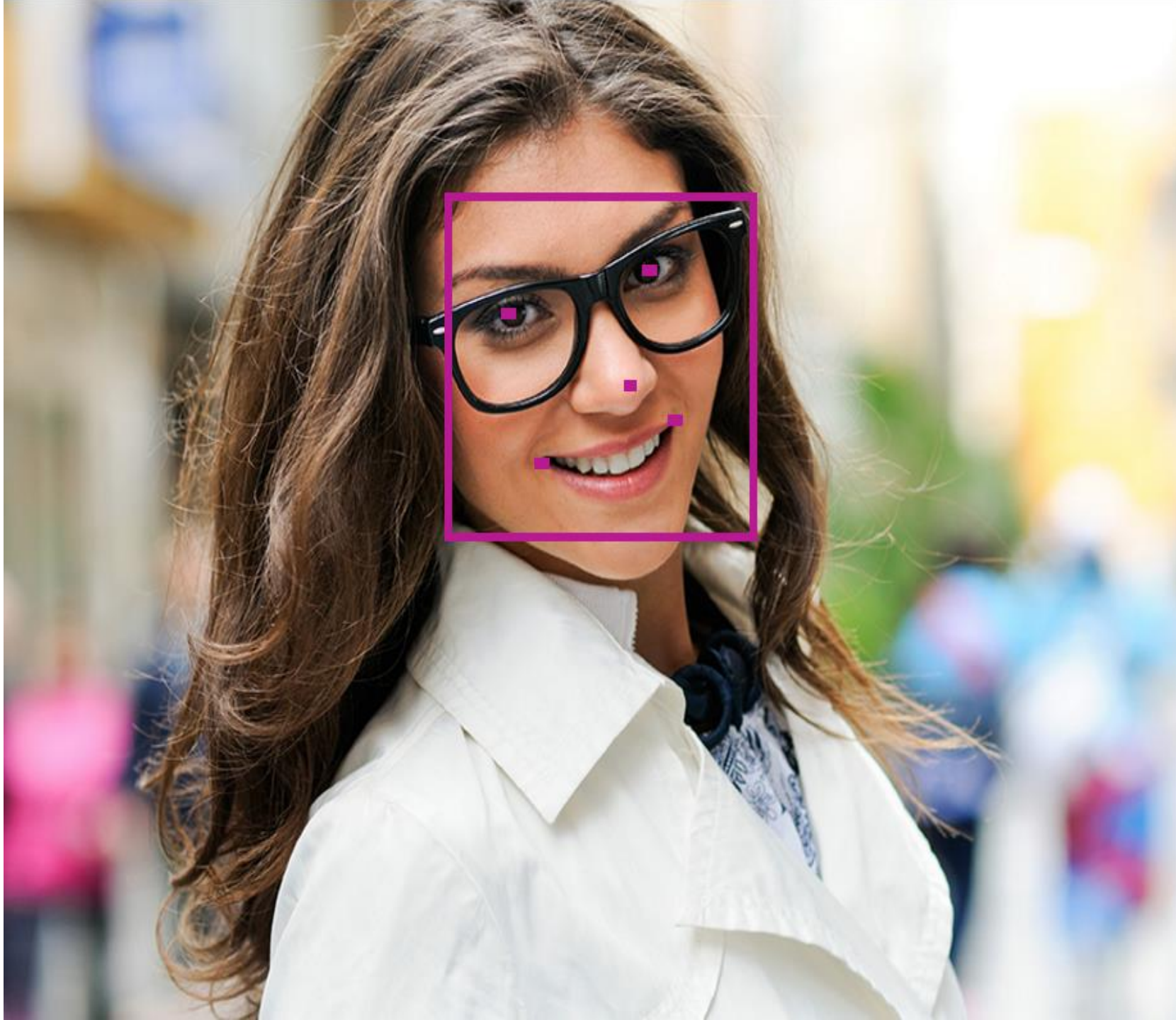


Unsupervised Learning

Clustering Model

5.
ML &
Cognitive API

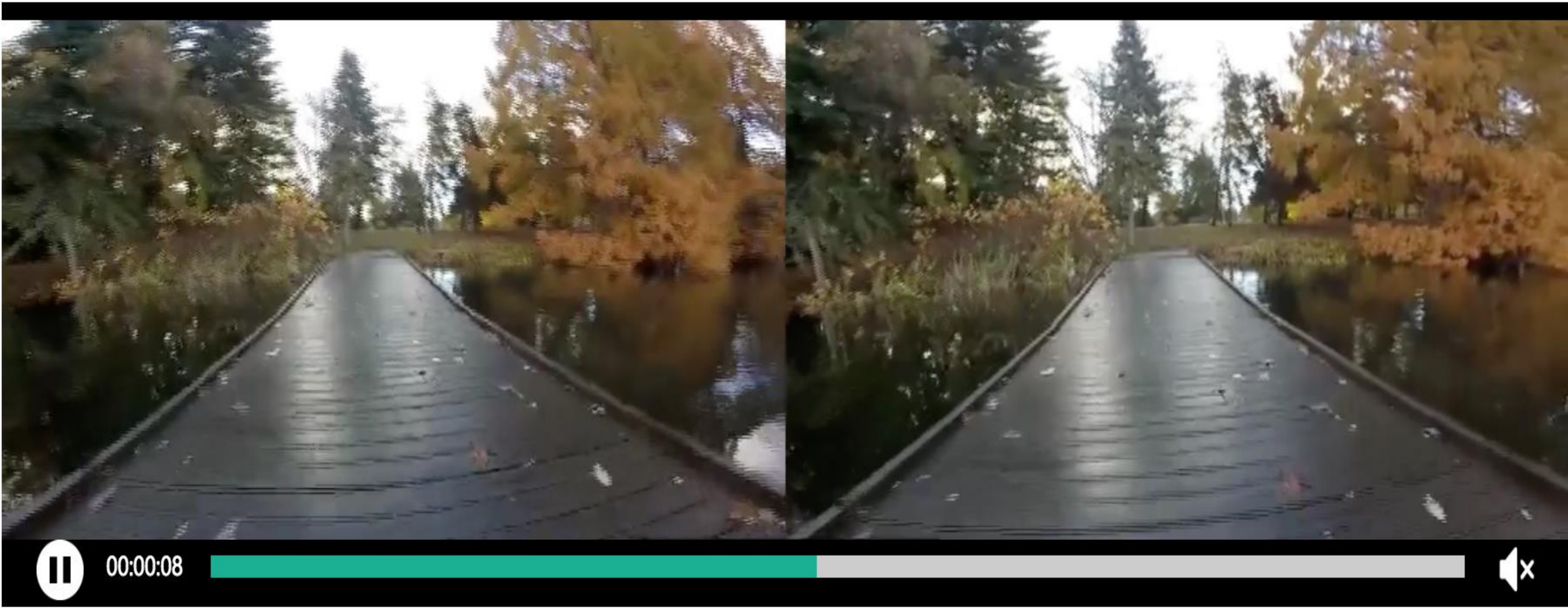
Cognitive Services
Face API



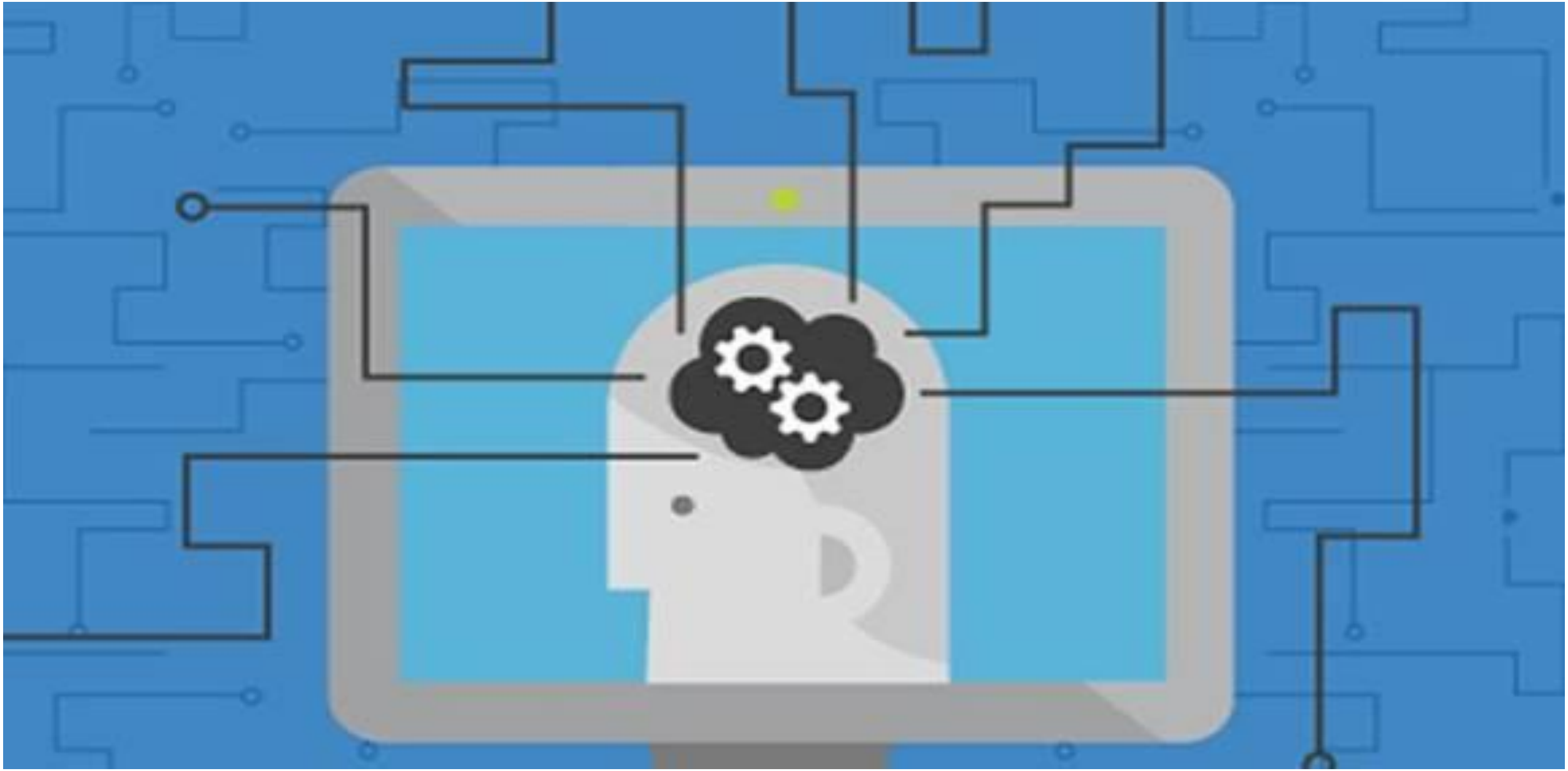
Cognitive Services
Recommendation API

Cognitive Services

Video API

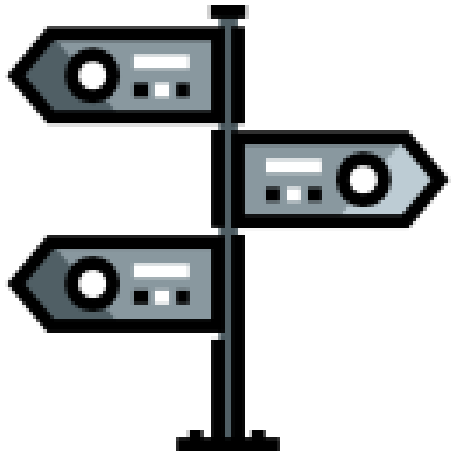


Session 1...



출처

amyyy_@naver.com



- 인공지능, 머신러닝, 딥러닝 입문 / 위키북스 / 김의중지음
- 모두를 위한 머신러닝/딥러닝 강의
- 맨땅에 해딩 머신러닝
- 개발자를 위한 머신러닝 / 임백준

Machine Learning 기초 이론부터 Azure ML Studio 사용 실

짬사합니다

Microsoft