



Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

Amazon Web Services

MLOps with AWS

Masterclass



Machine Learning

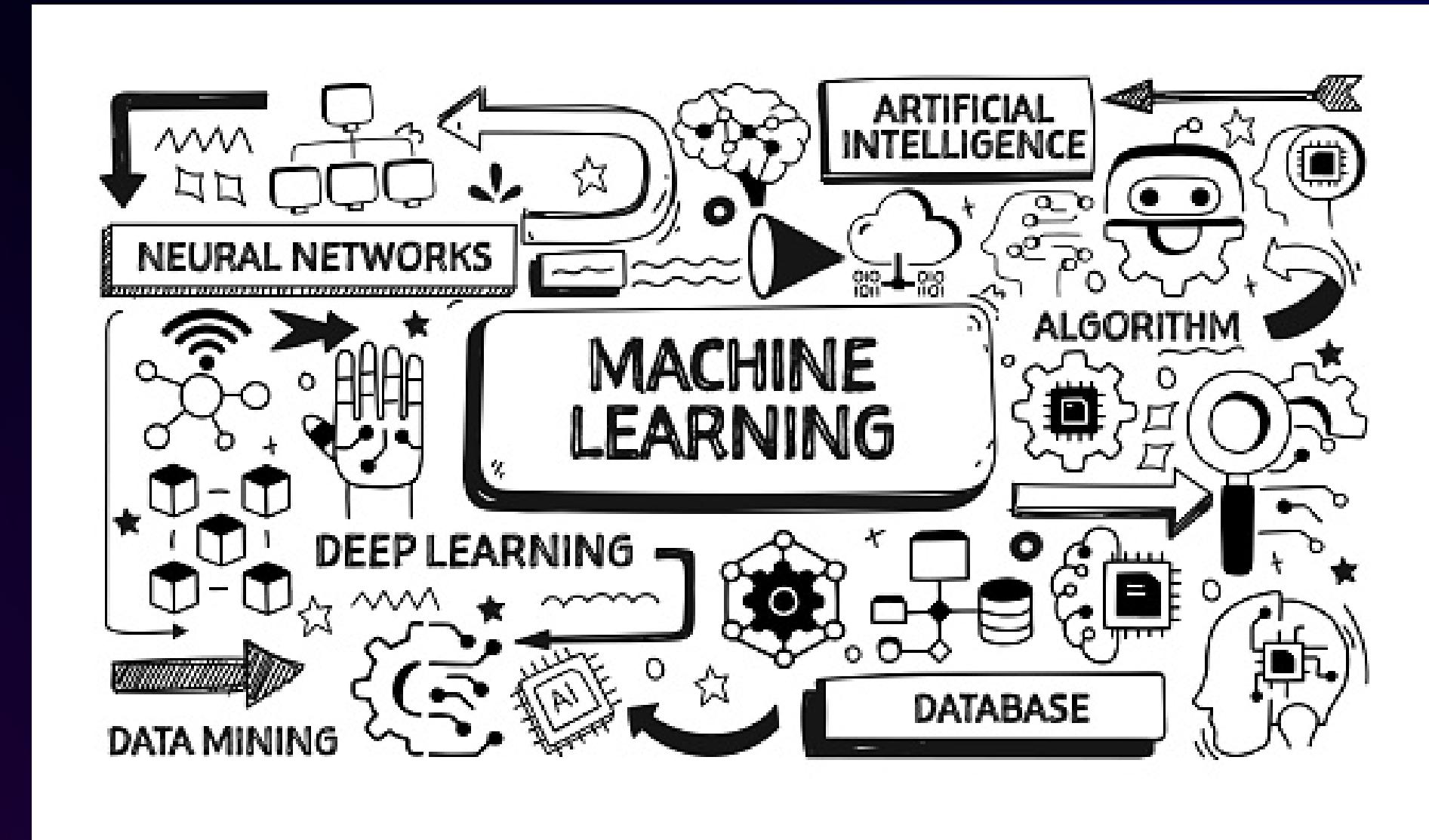
Operations with AWS

Day -5



Pantech e Learning
DIGITAL LEARNING SIMPLIFIED

MACHINE LEARNING



HIERARCHY

Artificial Intelligence:

Mimicking the intelligence or behavioural pattern of humans or any other living entity.

Machine Learning:

A technique by which a computer can "learn" from data, without using a complex set of different rules. This approach is mainly based on training a model from datasets.

Deep Learning:

A technique to perform machine learning inspired by our brain's own network of neurons.

ARTIFICIAL INTELLIGENCE

- AI is branch of computer science that is concerned with building smart and intelligent machines
- Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are designed to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation

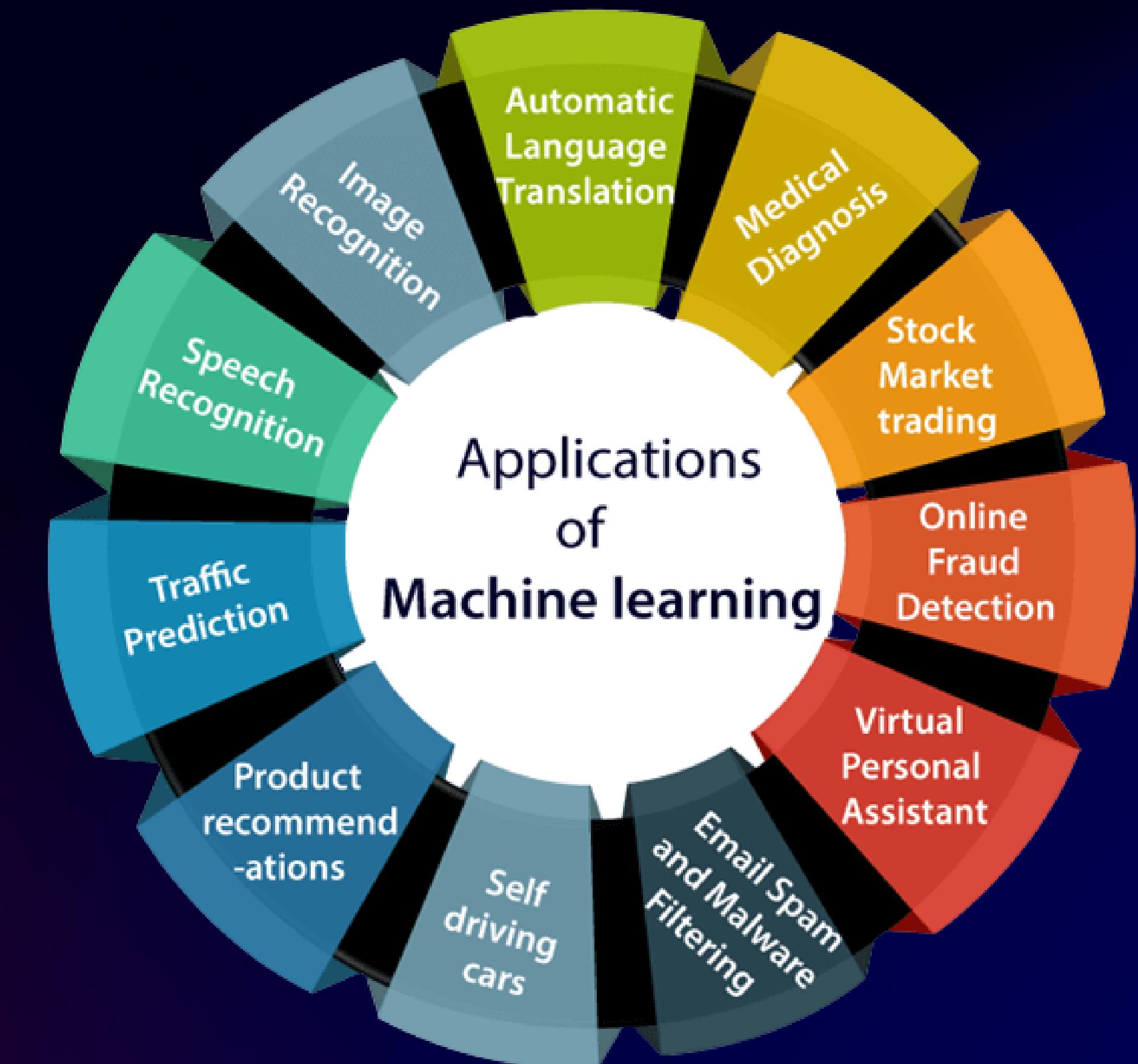
MACHINE LEARNING

Machine Learning is a subfield of Artificial Intelligence that focuses on the development of algorithms and statistical models that allow computers to learn from and make predictions or decisions.

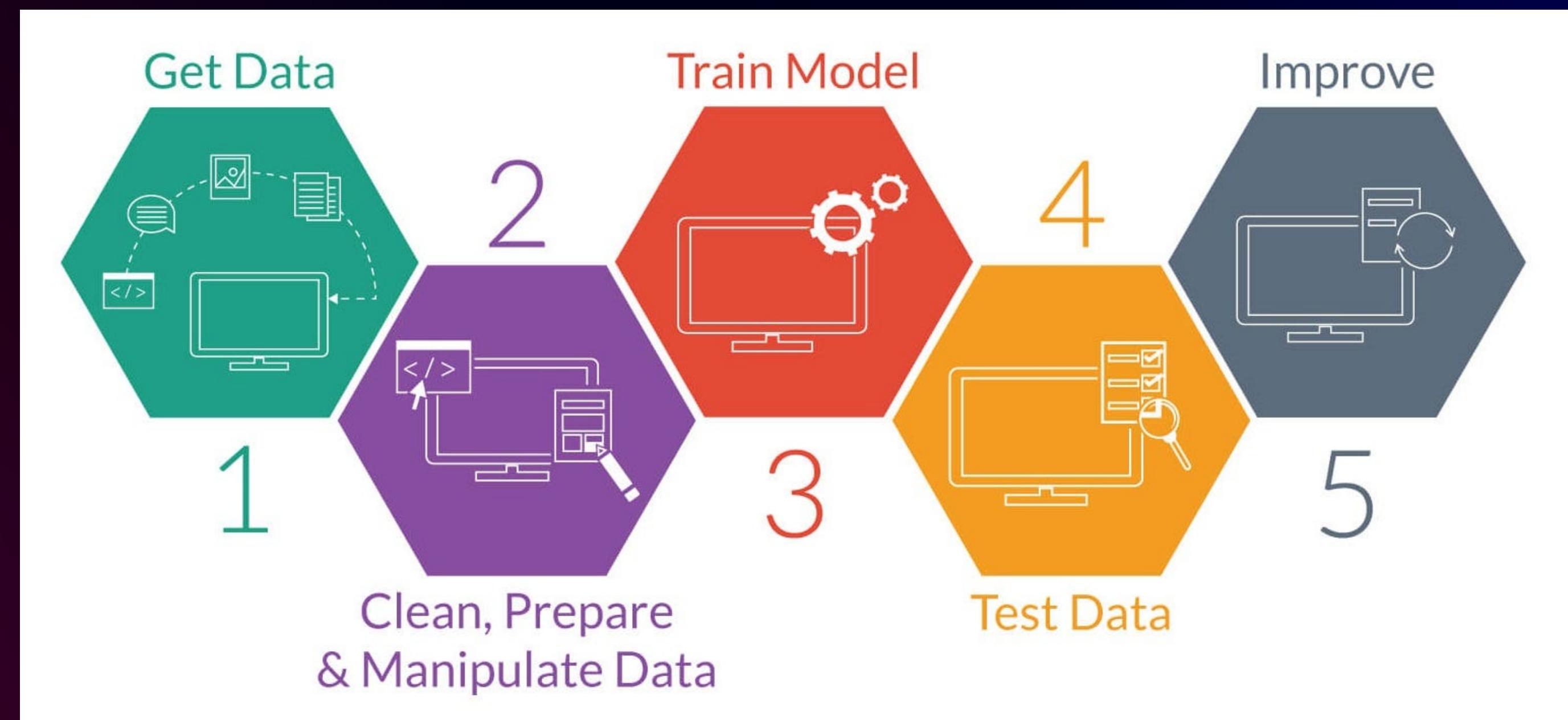
DEEP LEARNING

- Deep Learning is a subfield of machine learning that uses Artificial Neural Networks.
- Artificial neural networks are inspired by the structure and function of the brain

APPLICATIONS OF MACHINE LEARNING



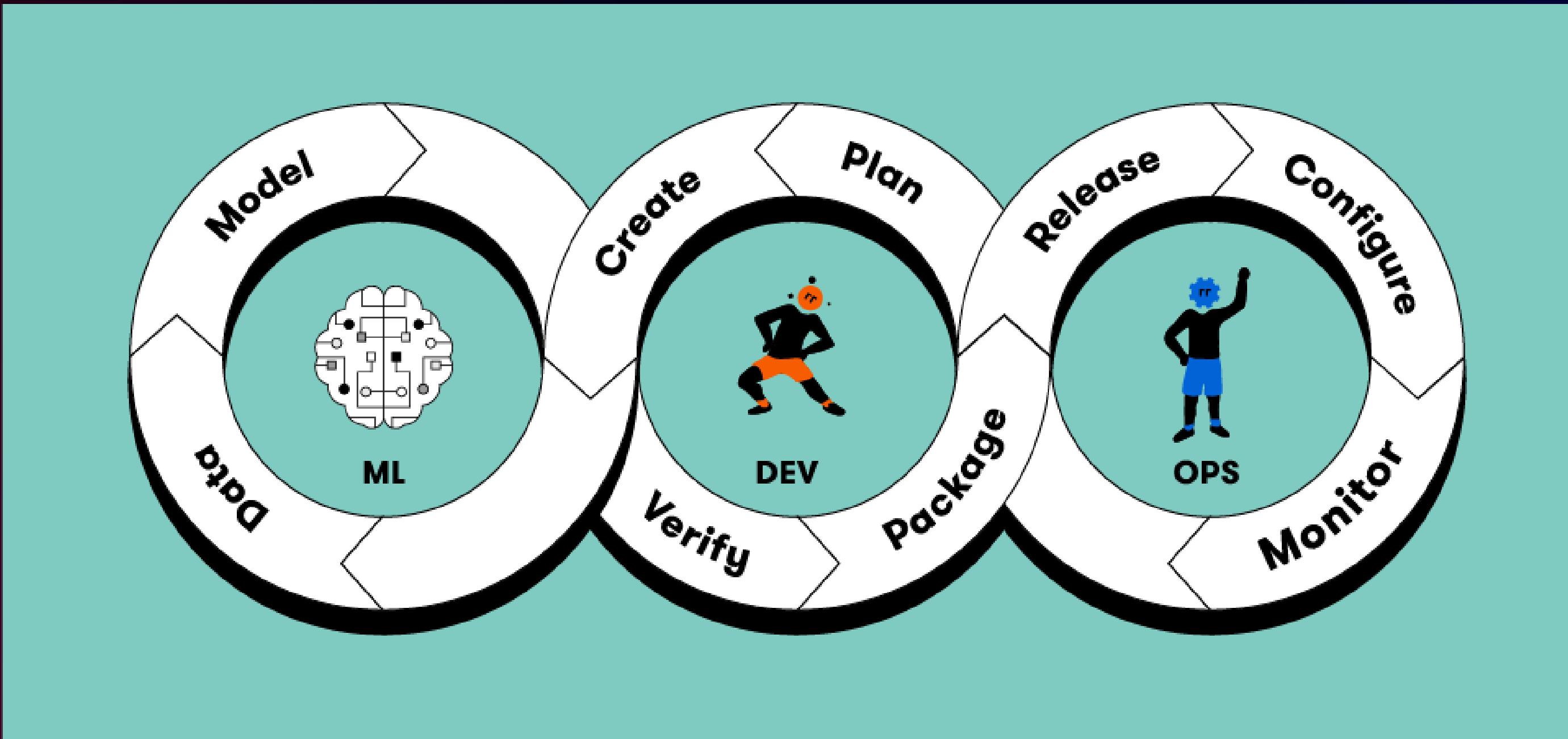
STEPS IN MACHINE LEARNING



MACHINE LEARNING OPERATIONS (MLOPS)

- MLOps is a core function of Machine Learning engineering, focused on streamlining the process of taking machine learning models to production, and then maintaining and monitoring them.
- MLOps is a collaborative function, often comprising data scientists, devops engineers, and IT.

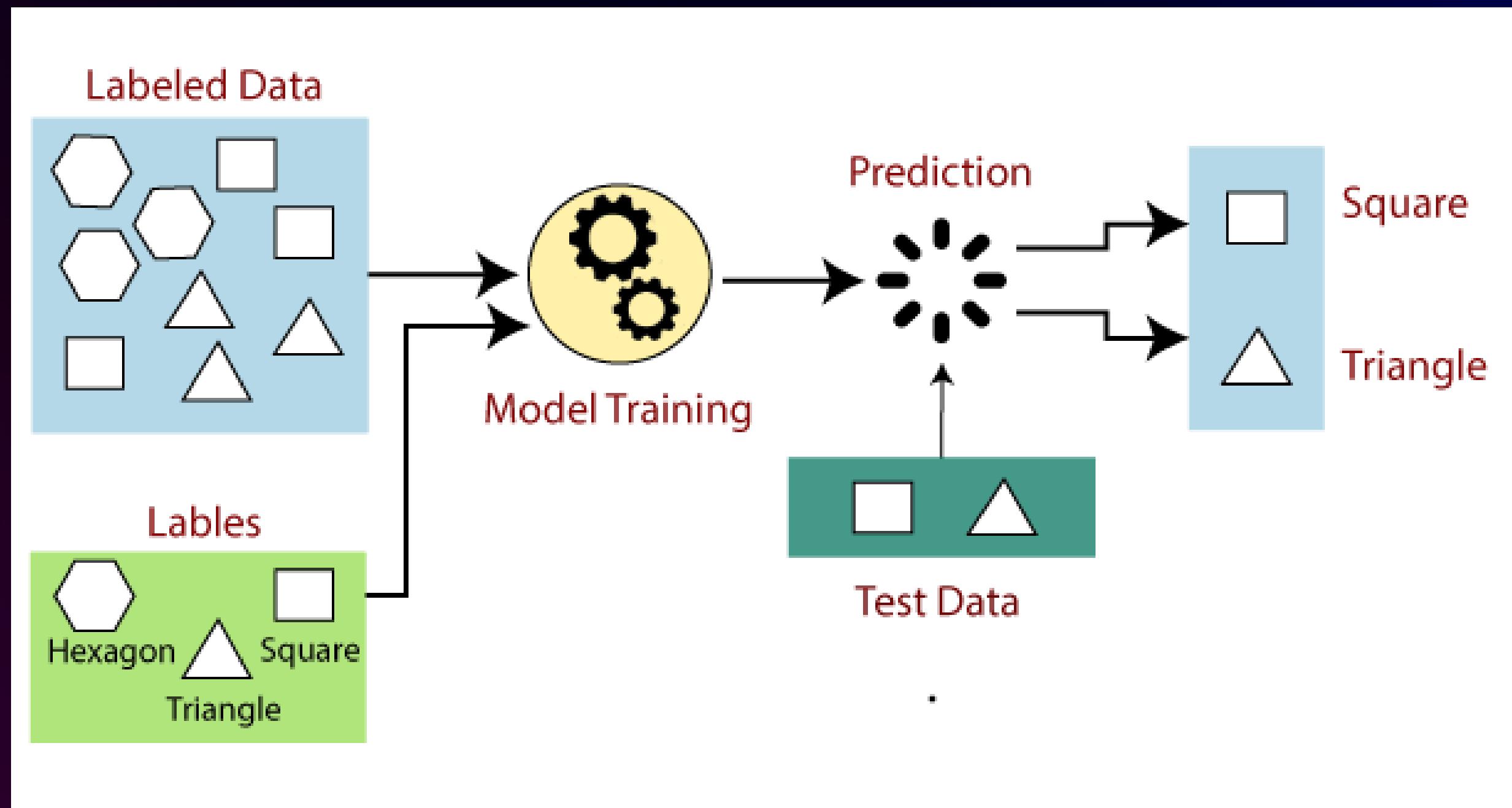
STEPS IN MACHINE LEARNING OPERATIONS (MLOPS)



TYPES OF MACHINE LEARNING

- Supervised Machine Learning
- Unsupervised Machine Learning
- Reinforcement Learning

SUPERVISED MACHINE LEARNING



SUPERVISED MACHINE LEARNING TYPES



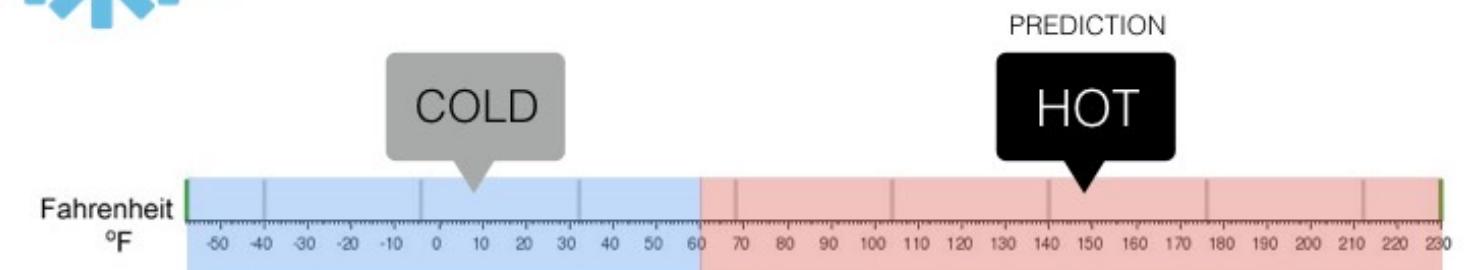
Regression

What is the temperature going to be tomorrow?

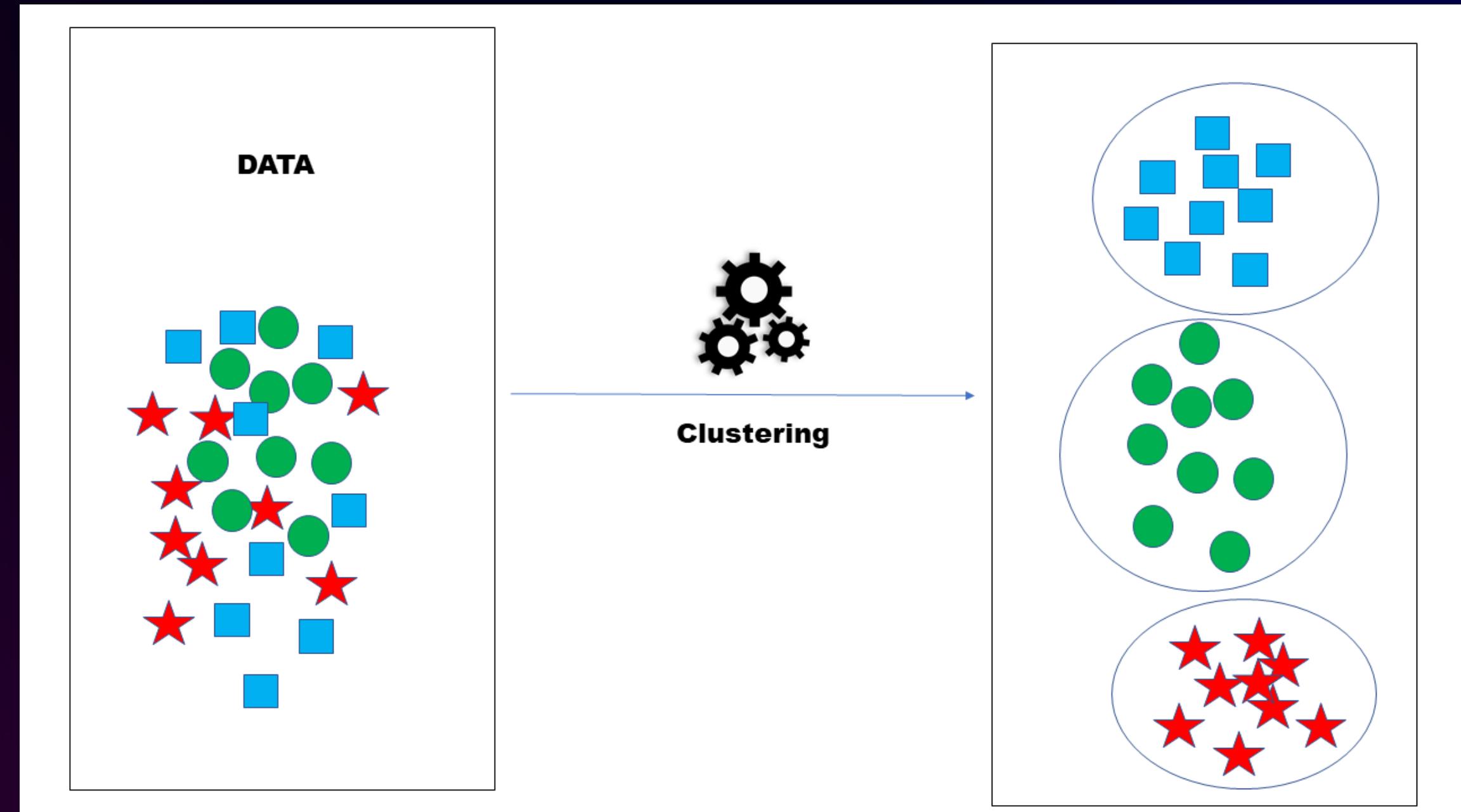


Classification

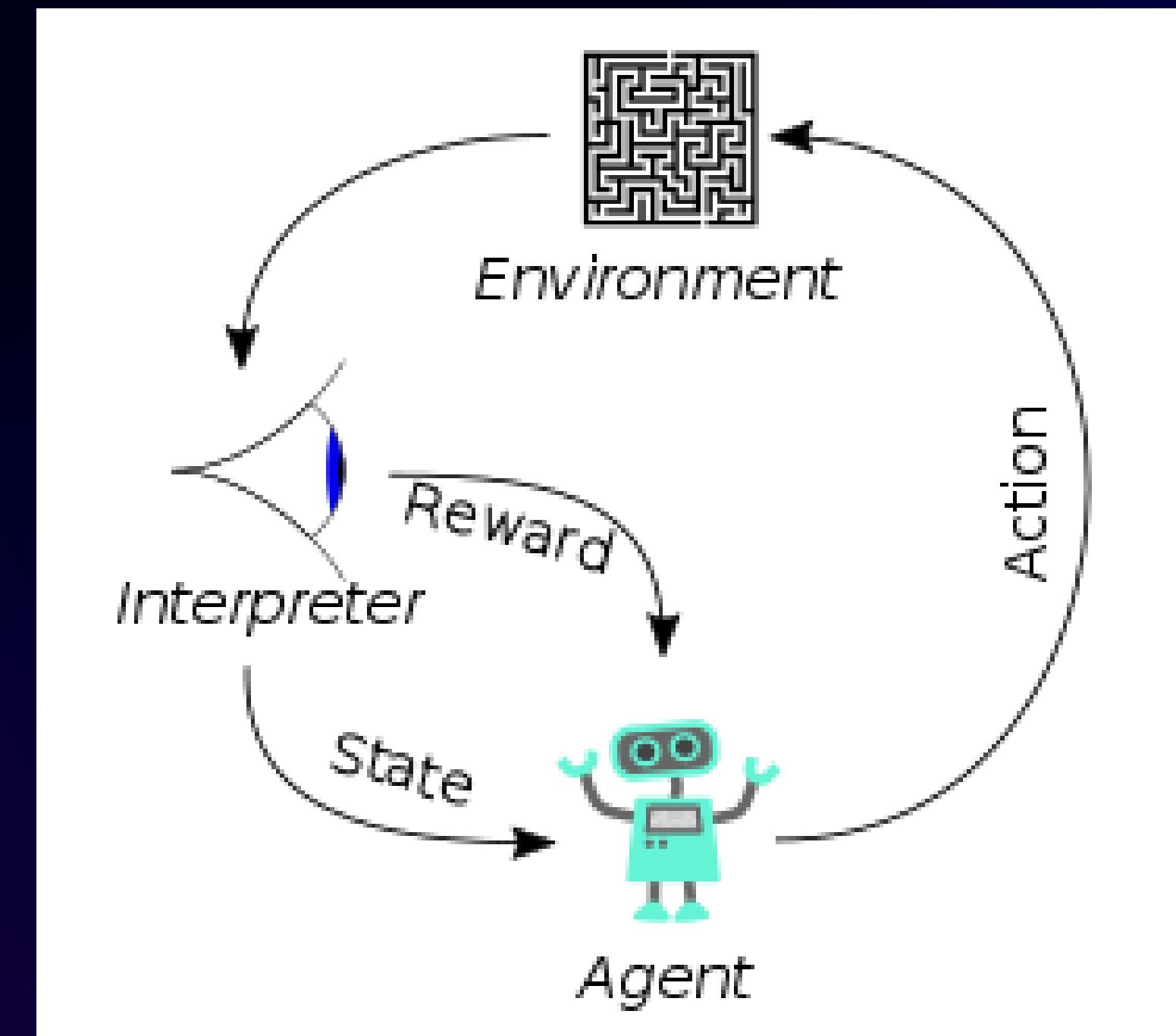
Will it be Cold or Hot tomorrow?



UNSUPERVISED MACHINE LEARNING



REINFORCEMENT MACHINE LEARNING



Amazon Sagemaker



Amazon SageMaker

Amazon Sagemaker

- Amazon SageMaker is a managed service from AWS that simplifies the process of building, training, and deploying machine learning models.
- It provides a complete set of tools and resources for data scientists and developers to develop and deploy ML models at scale.



WORKFLOW IN MACHINE LEARNING

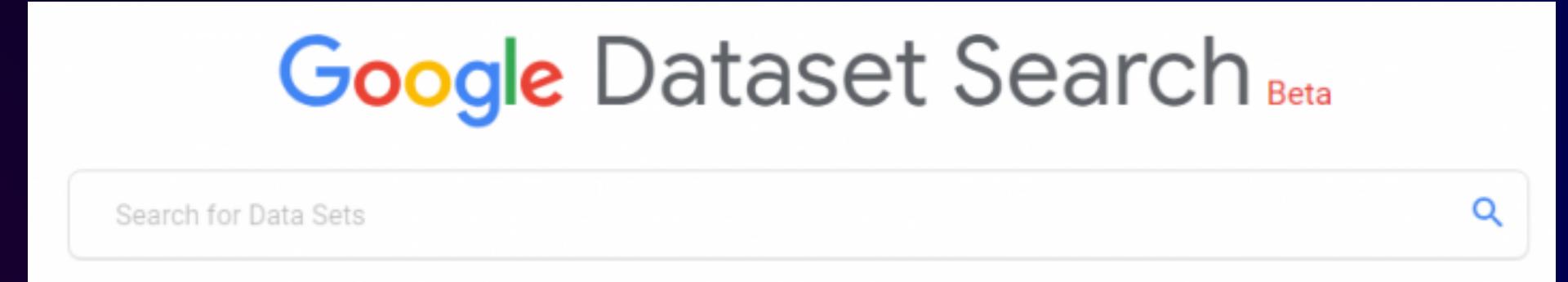
- Data collection
- Preprocessing
- Feature selection
- train, test, split
- Model - selection, training
- Predictions
- Evaluate and improve

Data Collection

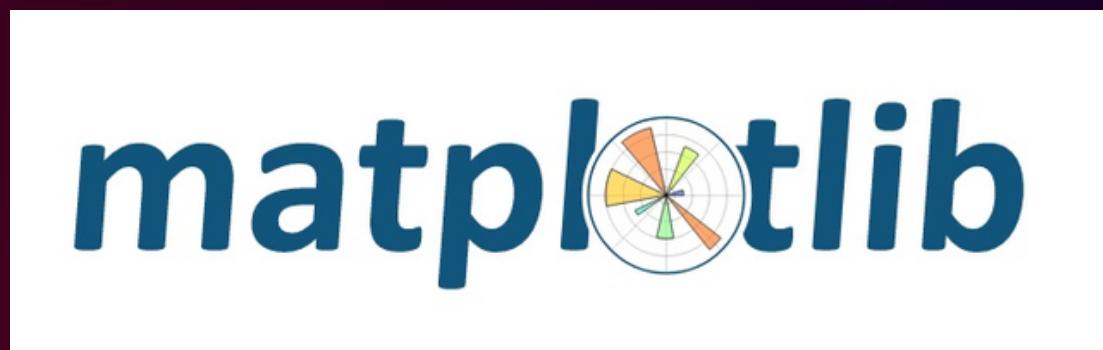


Data Collection

kaggle



Data Analysing & Preprocessing Libraries



Pandas



Thank you

