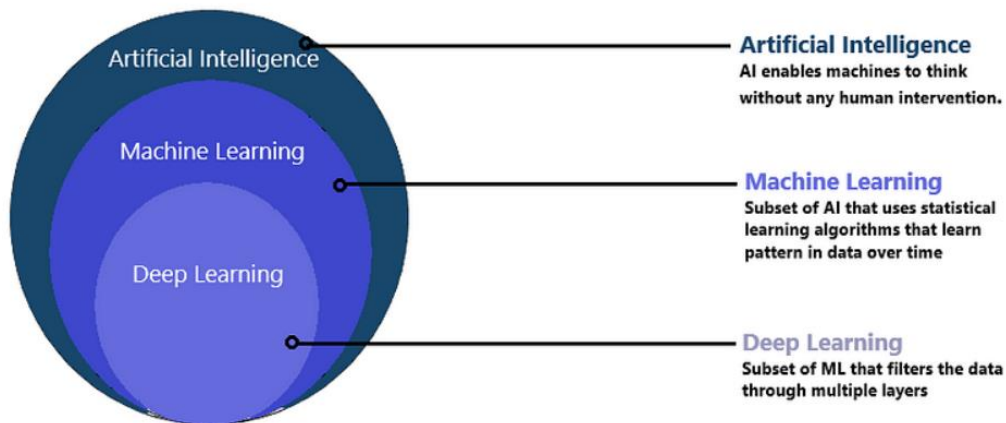
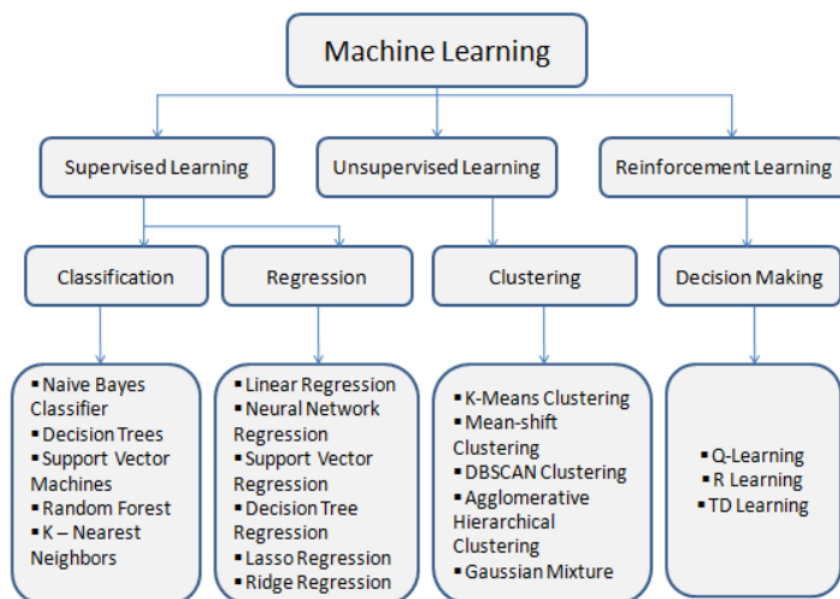


Machine Learning



- **Artificial Intelligence** is purely math and scientific exercise but when it becomes computational, it starts to solve human problems.
- **Machine Learning** is a subset of Artificial Intelligence.
- ML is the study of computer algorithms that improve automatically through experience.
- ML explores the study and construction of algorithms that can learn from data and make predictions on data.
- Based on more data, machine learning can change actions and responses which will make it more efficient, adaptable, and scalable.
- **Deep Learning** is a technique for implementing machine learning algorithms.
- It uses **Artificial Neural Networks** for training data to achieve highly promising decision making.
- The neural network performs micro calculations with computational on many layers and can handle tasks like humans.

Types of Machine Learning



Machine Learning Life cycle

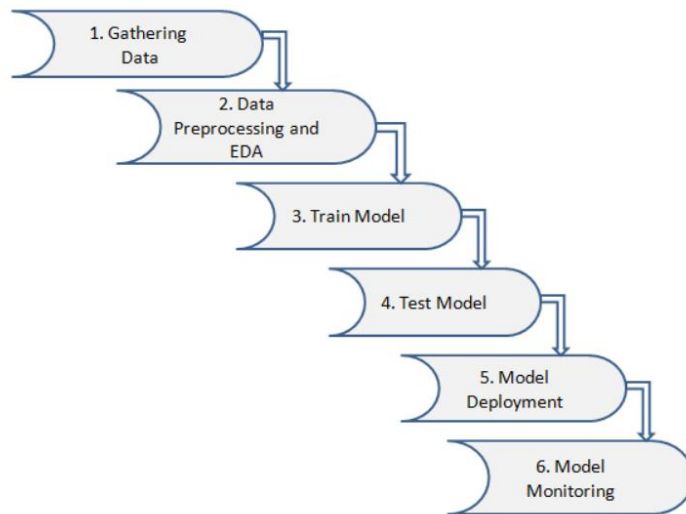


Figure: Machine Learning Life-cycle

Some Real-World Applications of Machine Learning

- Automatic Language Translation in Google Translate
- Faster route selection in Google Map
- Driverless/Self-driving car
- Smartphone with face recognition
- Speech Recognition
- Ads Recommendation System
- Netflix Recommendation System
- Auto friend tagging suggestion in Facebook
- Stock market trading
- Fraud Detection
- Weather Prediction
- Medical Diagnosis
- Chatbot
- Machine Learning in Agriculture

Benefits of machine learning

- Work Automation
- Powerful predictive Ability
- Increased in sales in the e-commerce market
- ML benefits in the medical domain for enhancing medical diagnosis, drug development
- Machine Learning is used in robotic medical surgery
- ML in finance increases productivity enhances revenue and gives secure transactions
- Modeling the data to make useful decisions