

# What is Artificial Intelligence

→ **Artificial Intelligence** refers to intelligence displayed by machines that simulates human and animal intelligence.



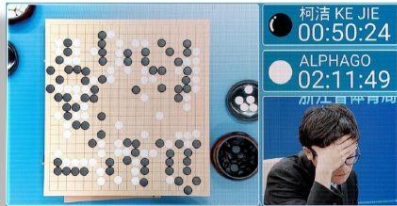
*Self-driving cars*



*Siri(iPhone)*



*Chess*



*Google's AlphaGo*

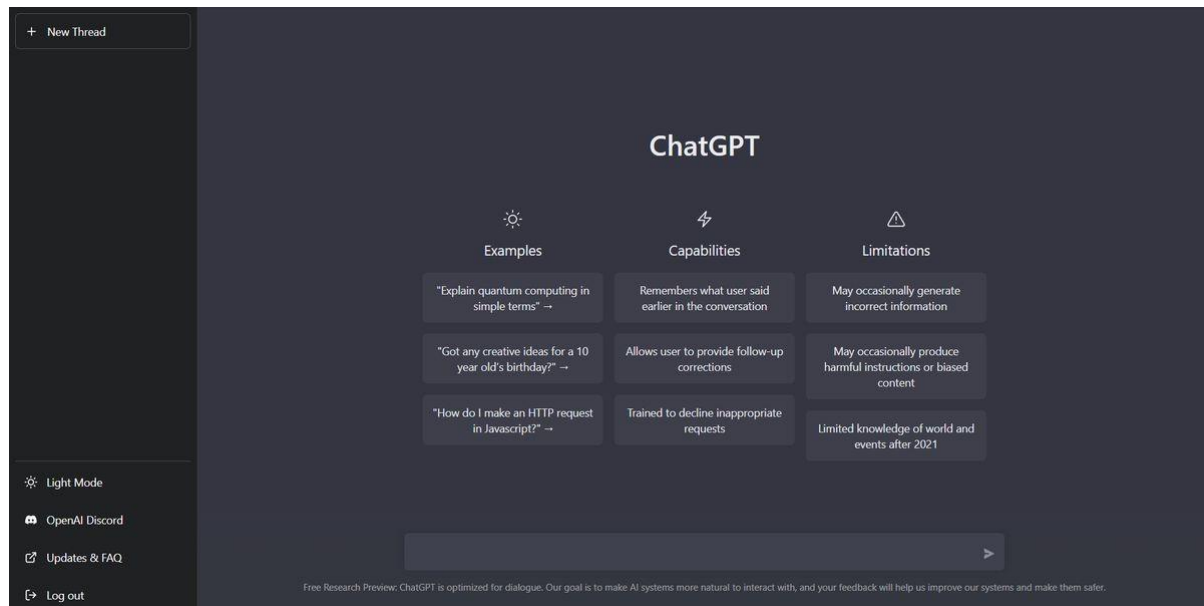


*Amazon ECHO*



*Concierge robot from IBM Watson*

# What is Artificial Intelligence



## Data Facilitates in Recommendations

Amazon collects data from users and recommends the best products according to the user's buying/shopping pattern.

amazon

Added to Cart

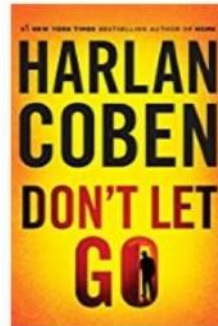
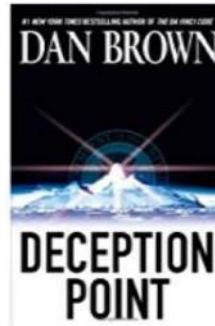
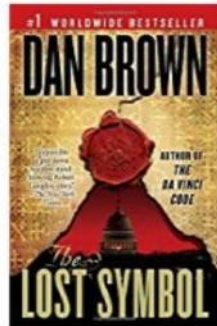
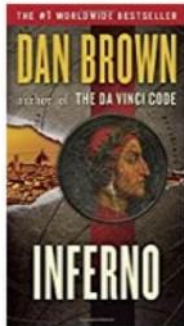
Cart subtotal (1 item): **\$17.96**

To qualify for **FREE Shipping**, add **\$7.04** of eligible items. [Details](#)

Cart

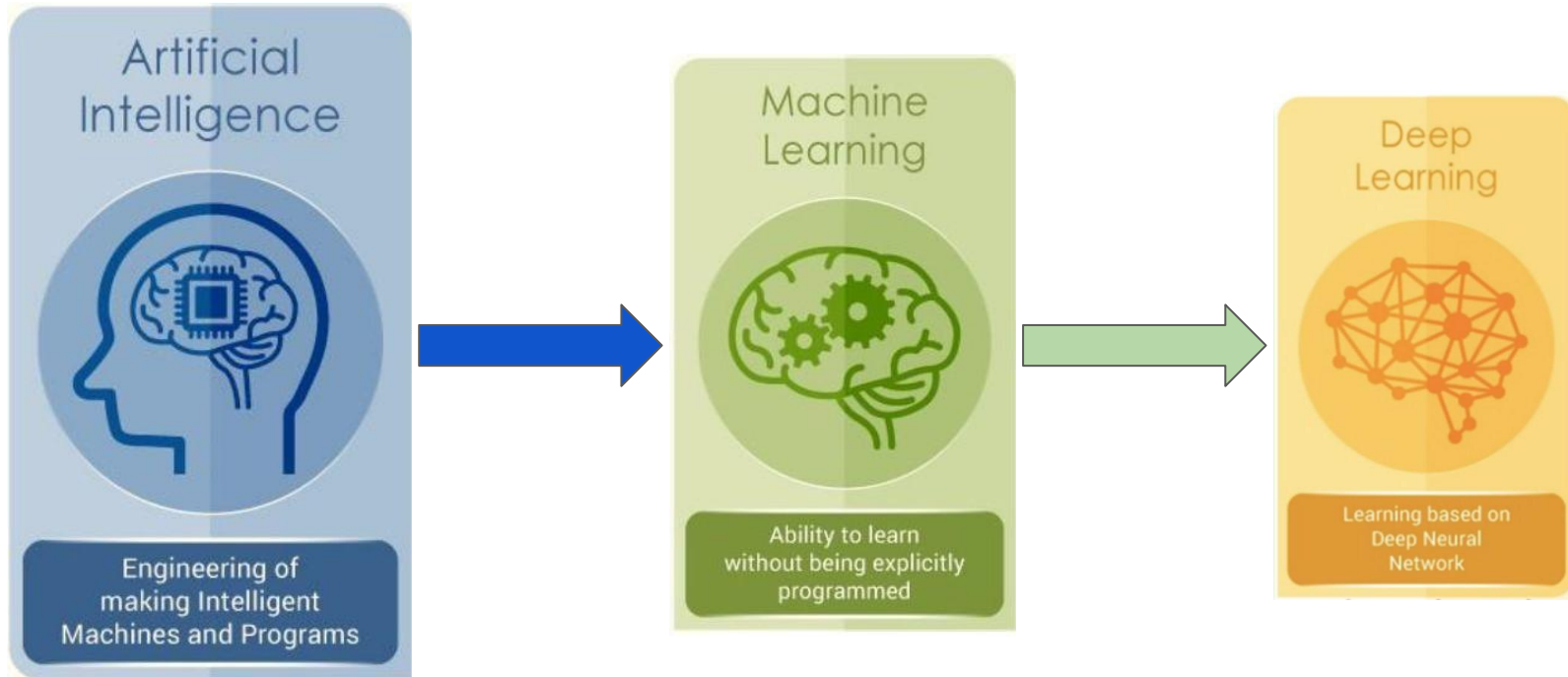
Proceed to checkout (1 item)

Customers who bought *Origin: A Novel* also bought



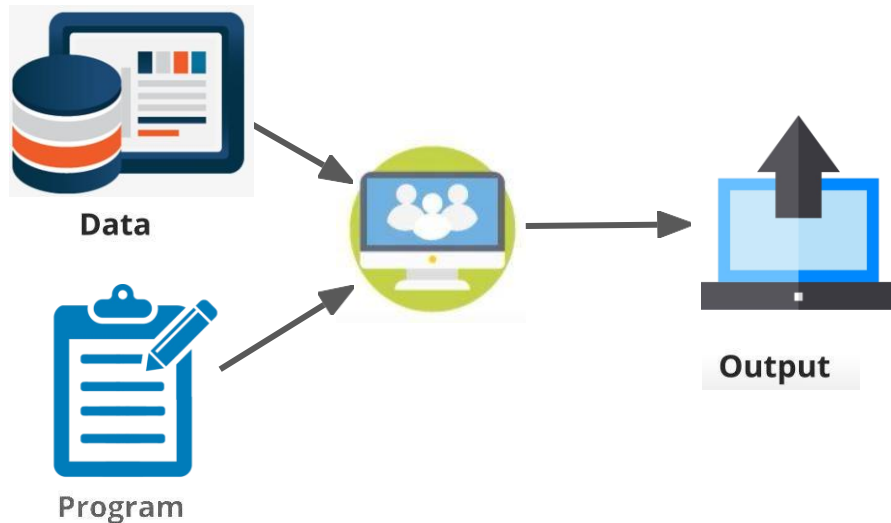
# Artificial Intelligence

- The capability of Artificial Intelligence systems to learn by extracting patterns from data is known as Machine Learning.



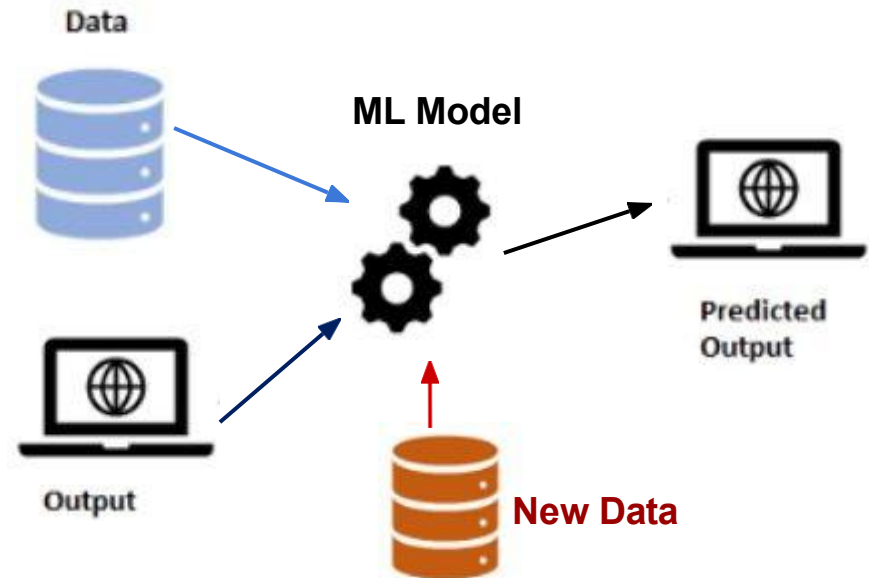
# Traditional Programming

Traditional Programming: You code the behavior of the program

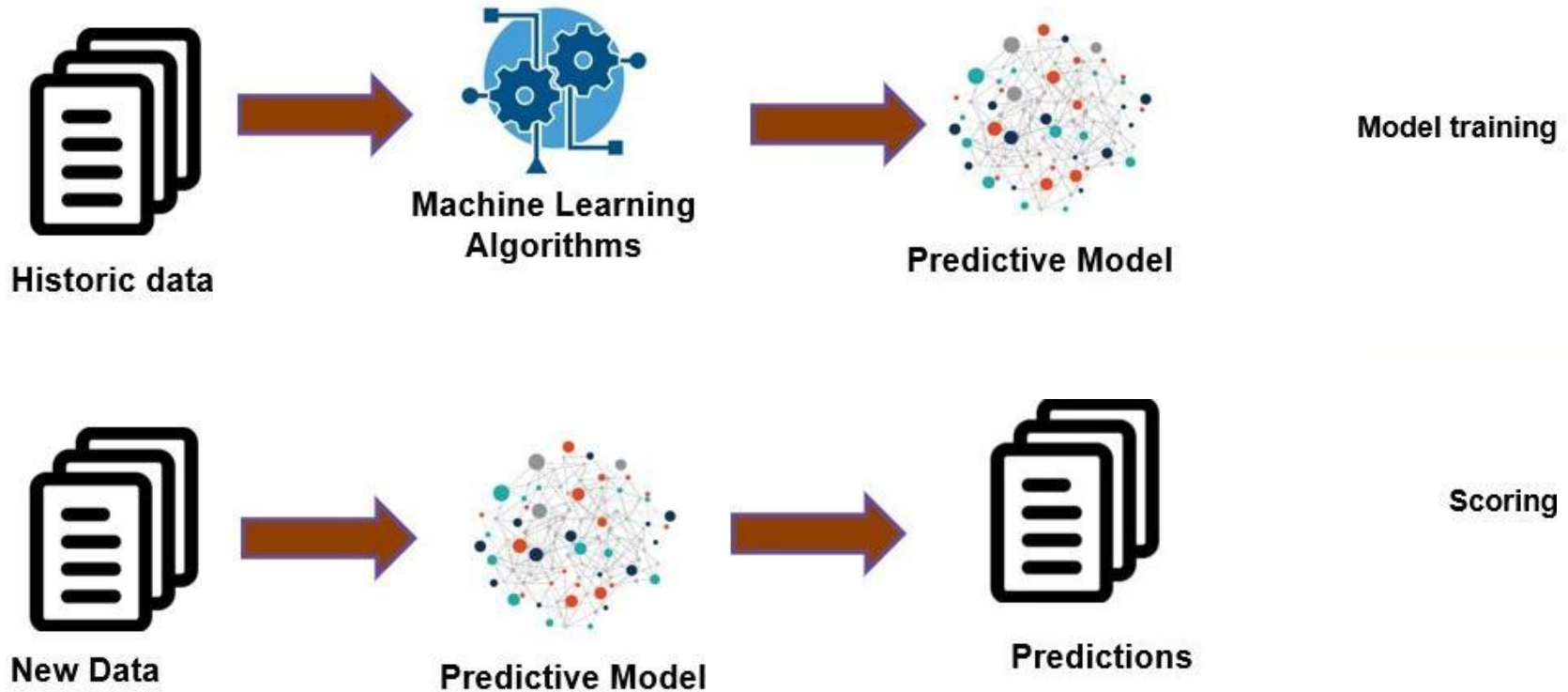


# Machine Learning

Machine Learning: You leave a lot of that to the machine to learn from data

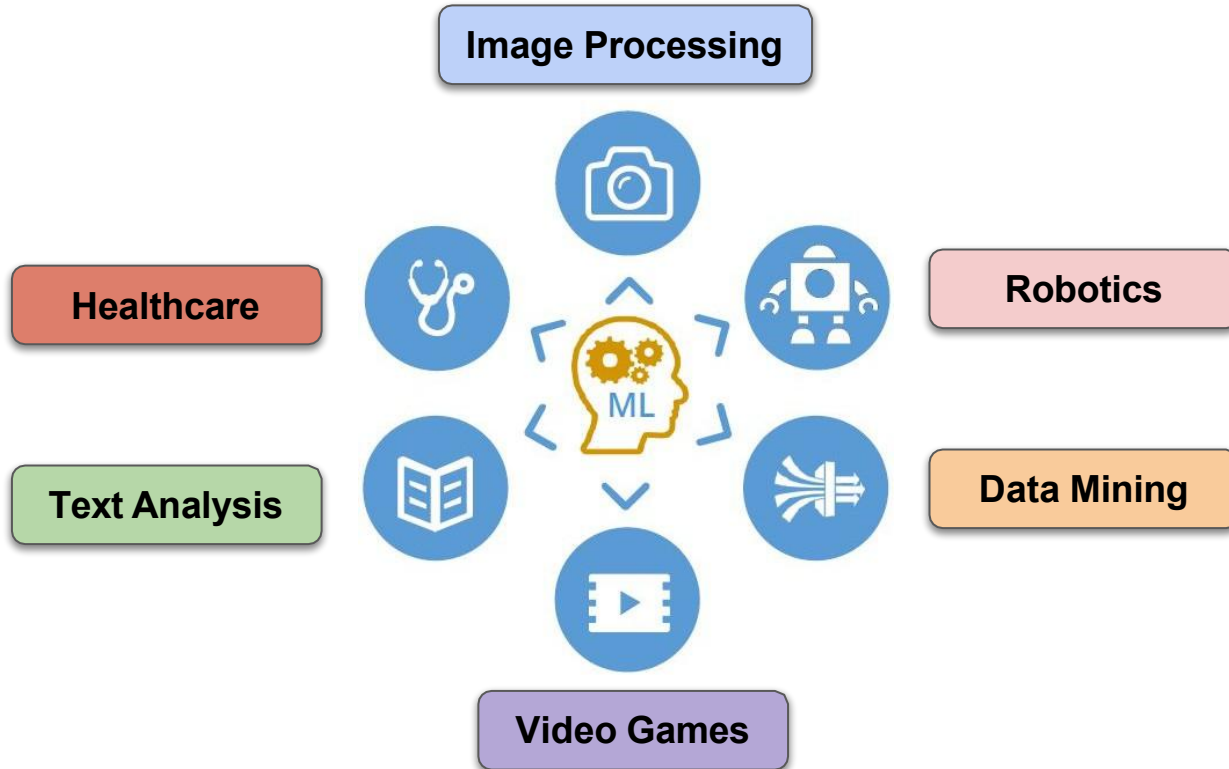


# Machine Learning Predictive Model



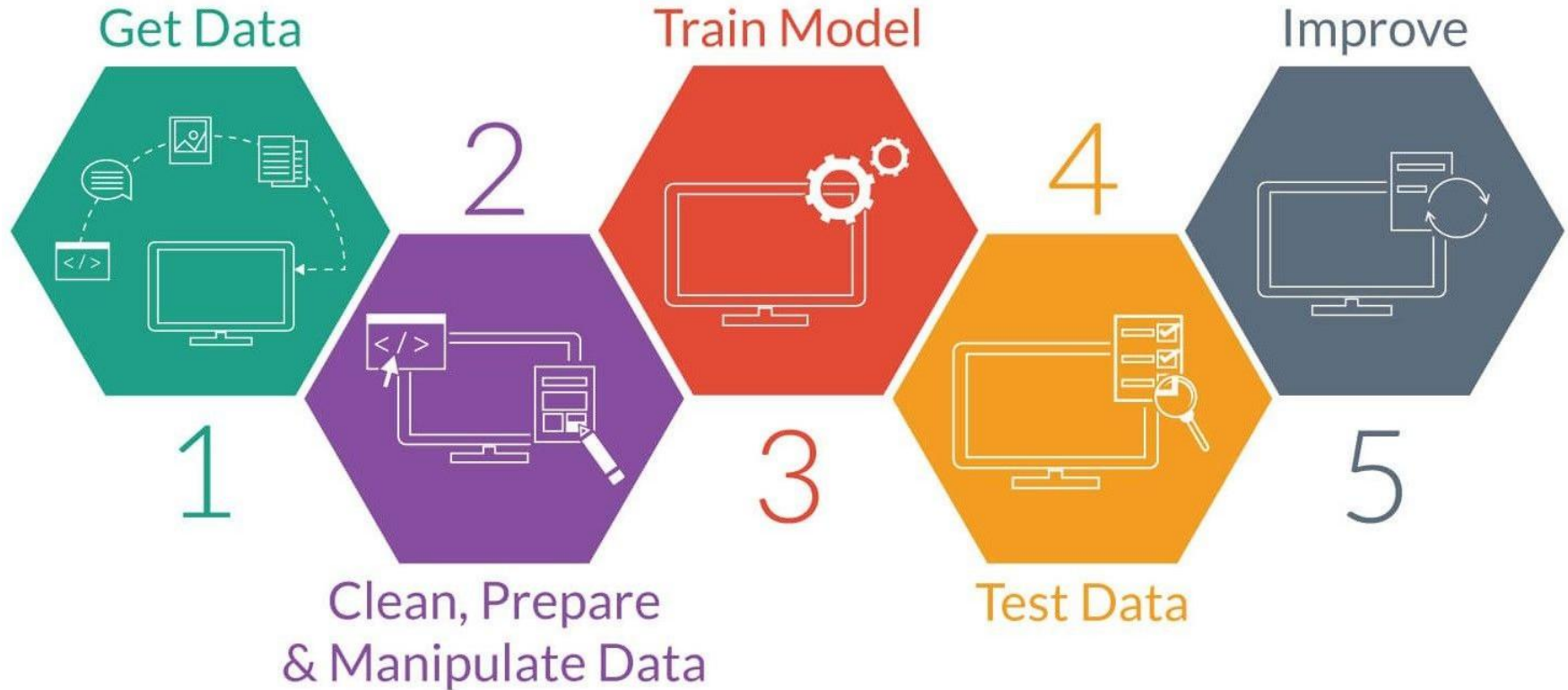
# Applications of Machine Learning

- The capability of Artificial Intelligence systems to learn by extracting patterns from data is known as Machine Learning.





# Machine Learning Cycle:





# Steps in Machine Learning



**1. Data Gathering**



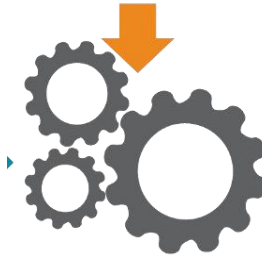
**2. Data Cleaning**



**3. Data Visualization**



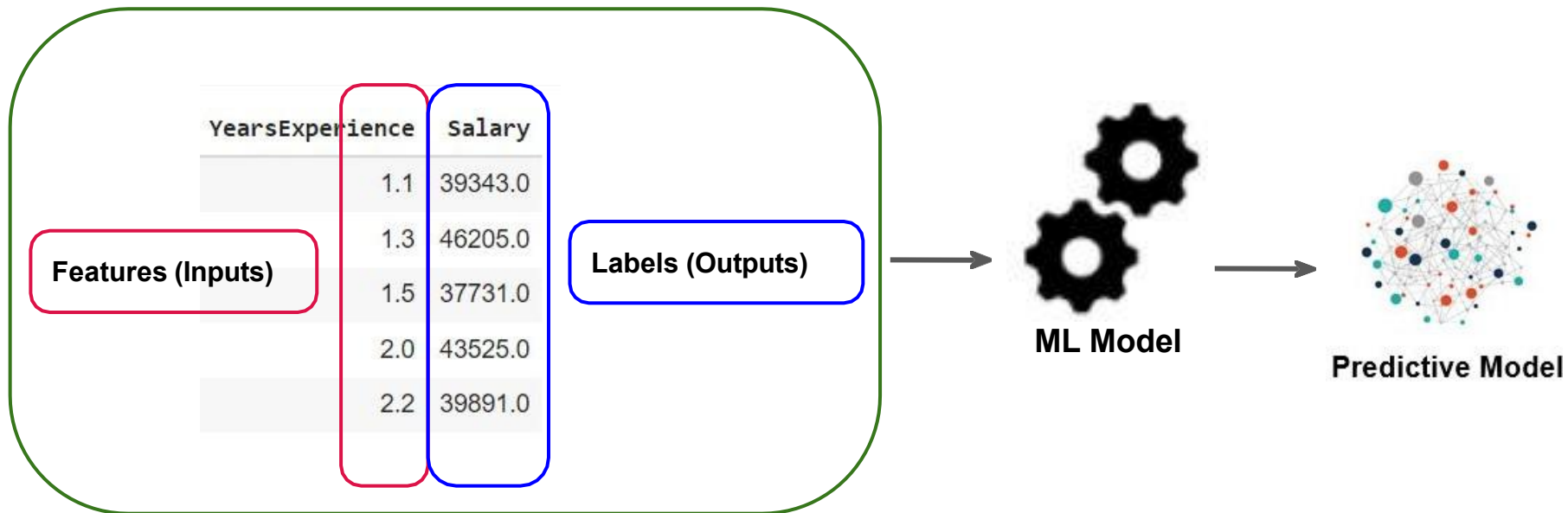
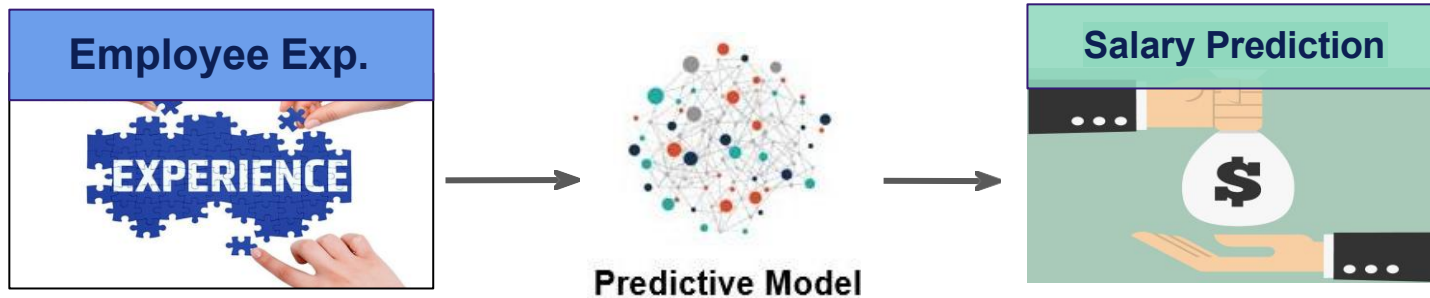
**Predictive Model**



**5. Training & Testing**



**4. Data Processing**





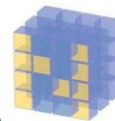
PC Applications

## Top 5 Python GUI Libraries



Machine Learning

matplotlib



NumPy



Pandas



Seaborn

Web Development

CherryPy



python™

django

Pyramid™

# Python Packages



*NumPy*

matplotlib



Pandas



seaborn

