KNN

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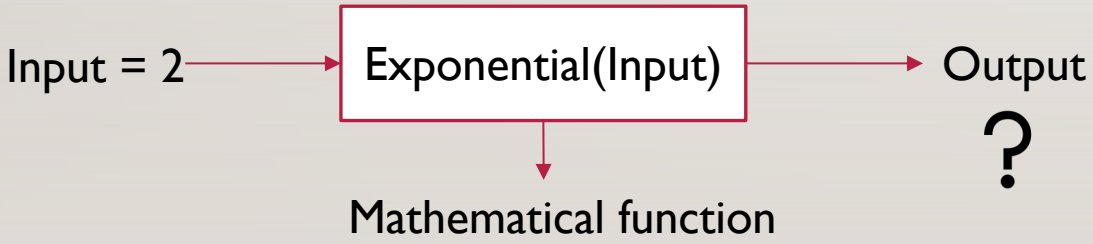
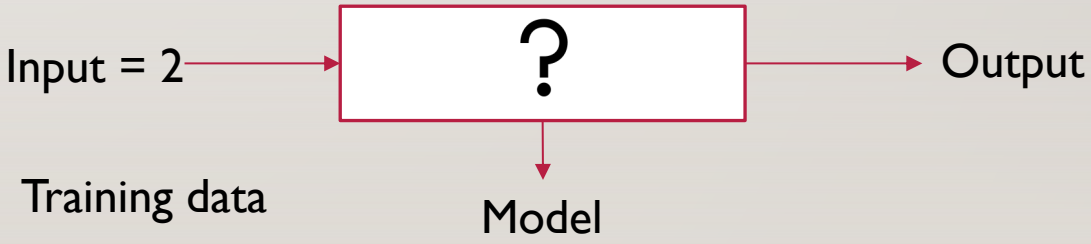
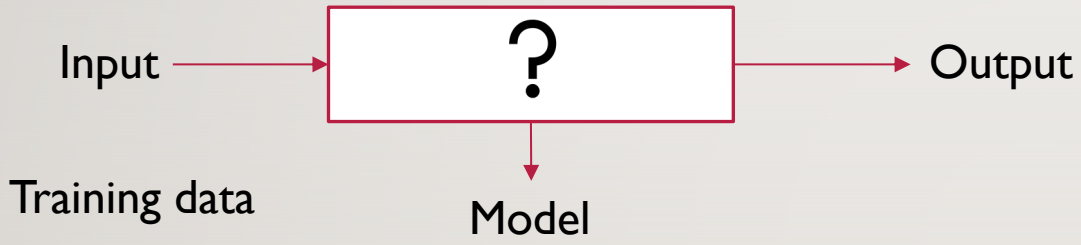
MACHINE LEARNING

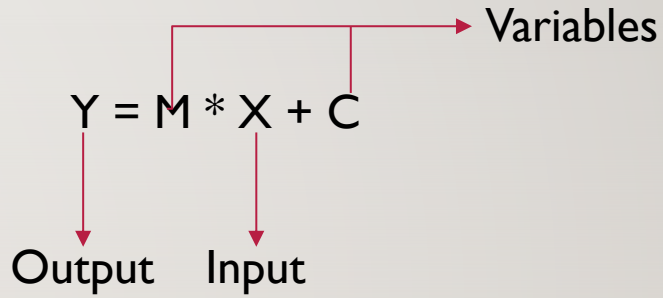
- Machine learning is the concept that a computer program can learn and adapt to new data without human interference.
- Machine learning is a field of artificial Intelligence (AI)





SUPERVISED LEARNING

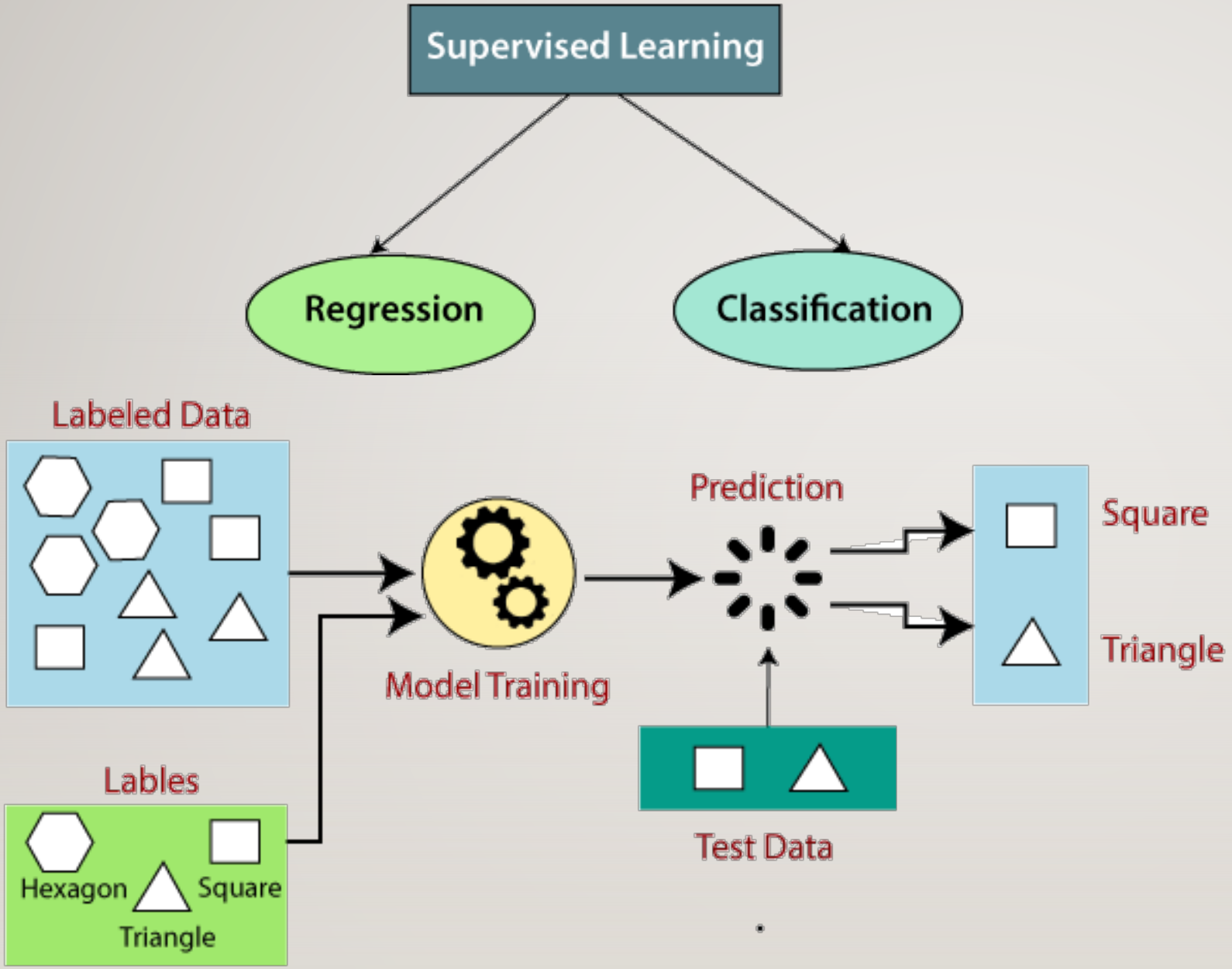




- task of learning a function that maps an input to an output based on example input-output pairs
- Learning basically means giving training data

Algorithms

- Support Vector Machines
- k- nearest neighbors
- Linear discriminant analysis
- Neural Networks
- Decision Trees
- Regression models



Classification

- Fraud Detection
- Email Spam detection
- Image classification
- Medical Diagnostics

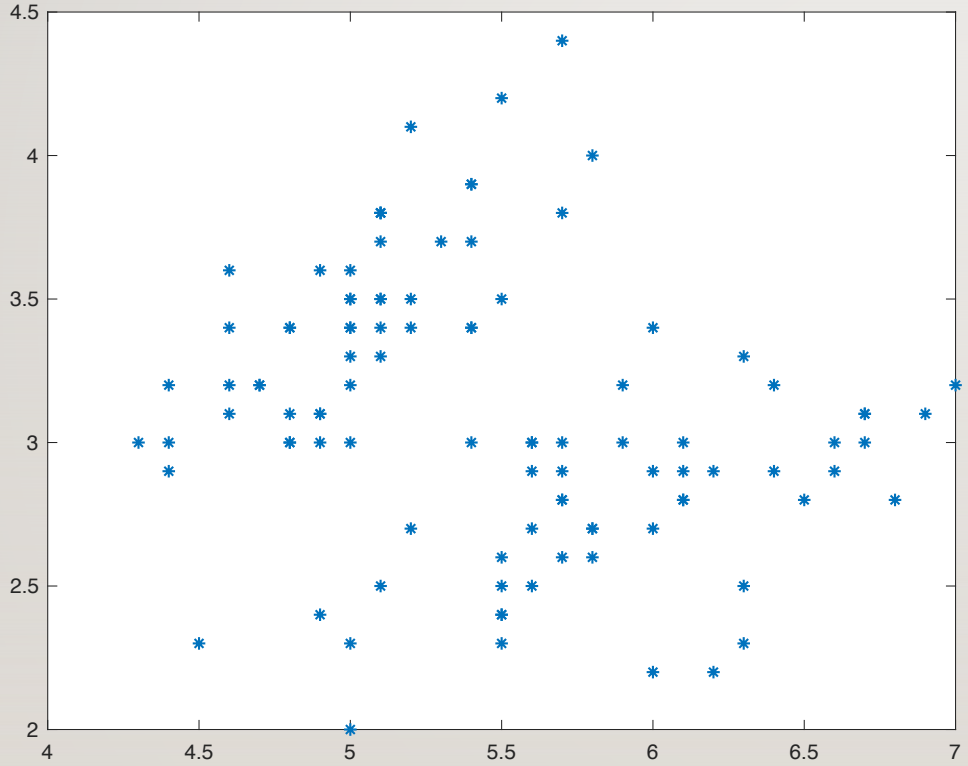
Regression

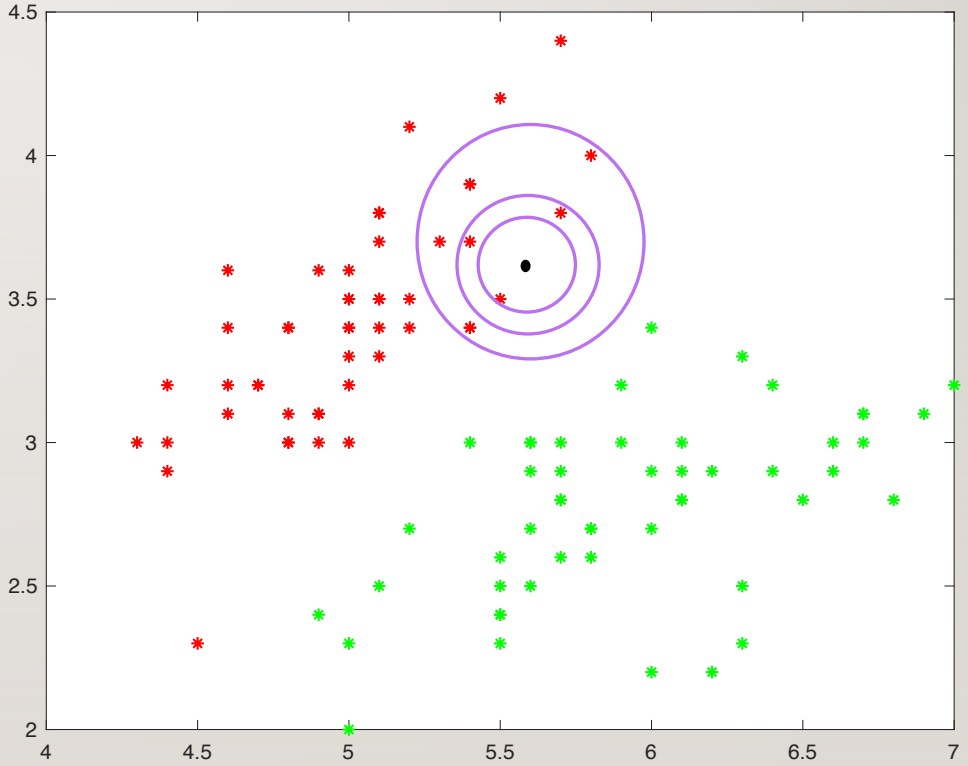
- Risk assessment
- Score prediction
- Corona Virus death prediction
- Stock market prediction

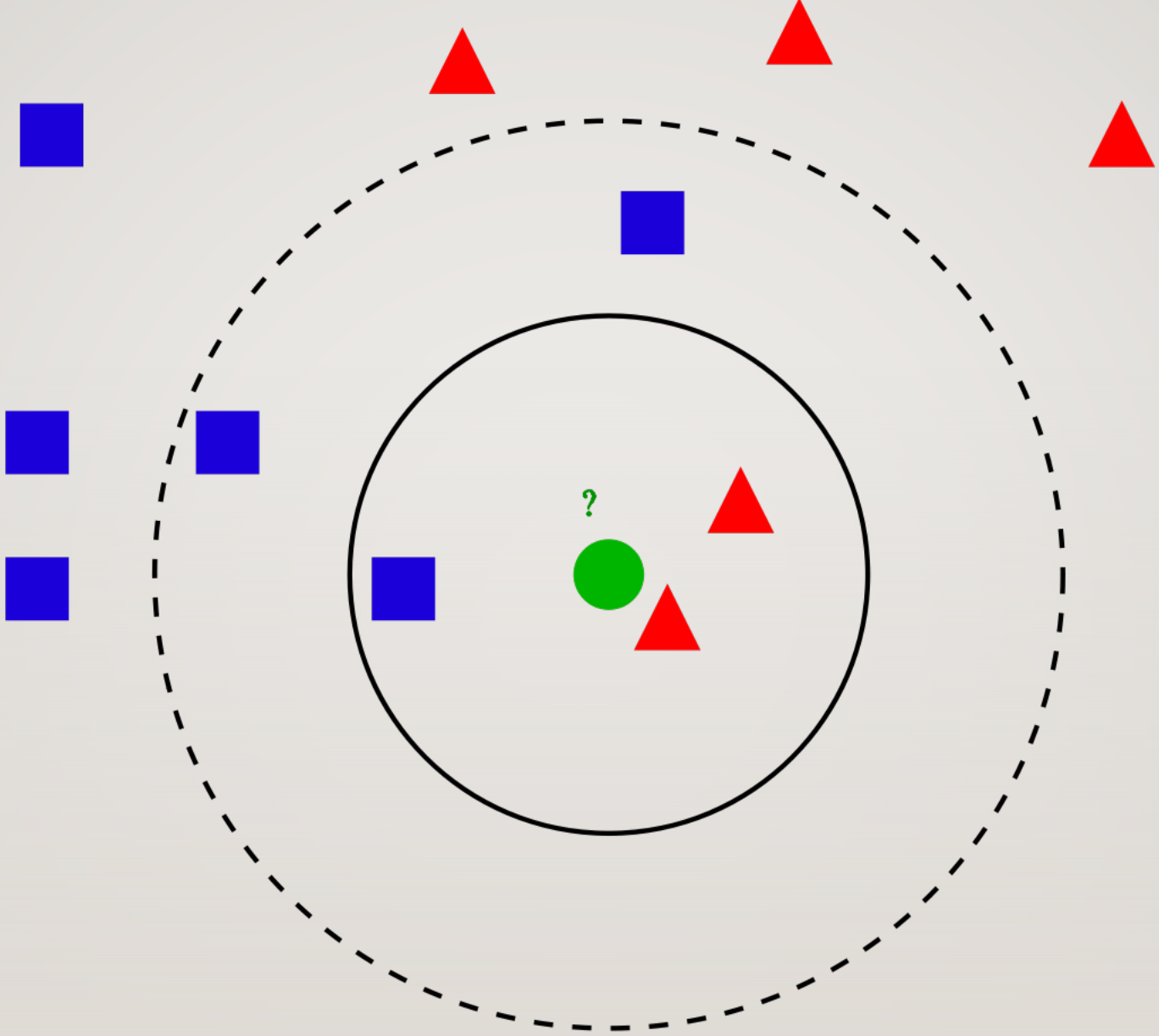
KNN – K NEAREST NEIGHBOR

- It is a supervised learning method which can be used for classification and regression tasks.
- The input consists of the *k* closest training examples in the feature space.
- This algorithm finds the distance between the points projected onto a higher dimensional space.
- Various distance metrices are considered like Euclidean distance, Chebyshev, Coorelation, Cosine etc…

KNN – K NEAREST NEIGHBOR







DATASET – IRIS DATA

- The dataset contains a set of 150 records under five attributes – petal length, petal width, sepal length, sepal width and species.

Input: petal length, petal width, sepal length, sepal width

Output: species (setosa, virginica, versicolor)



Thank You