Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE
Approved by AICTE | Affiliated by V.T.U Belagavi | Recognized by Govt. of Karnataka

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Technical Talk Report

DATE : **13/04/2023**

TIME : 2:00 pm – 4:00 pm

Attendees : Students of VI Semester Students of department AIML.

      The Department of Artificial Intelligence and Machine Learning had organized technical talk on "Machine Learning – Linear Regression" by the resource person " Dr. Maheswari L Patil " who is currently working as an Assistant Professor in the Department of Computer Science and Engineering, GMIT.

The technical talk carried out with below aspects of Machine Learning :

➢ What is Machine Learning ?The capability of Artificial Intelligence systems to learn by extracting patterns from data is known as Machine Learning.Providing ample data to machine so that machine can predict new kid of data

➢ Relationship between Artificial Intelligence and Machine Learning.

➢ ML approach

Machine Learning relies on learning patterns based on sample data.
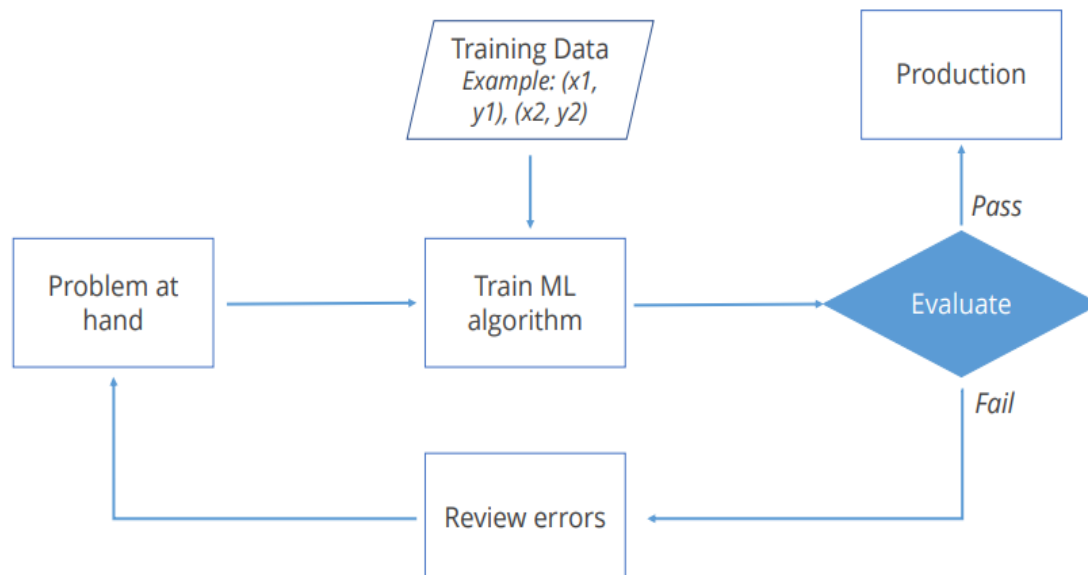
- These approaches includes problem solving skills by training the data and apply Machine Learning algorithm to analyse the ample sets of data.

- While in evaluation process errors occurs and will be reviewed. If it is success then it passes to the production for further process.

GM INSTITUTE OF TECHNOLOGY, DAVANGERE
Srishyla Educational Trust (R), Bheemasamudra
Approved by AICTE | Affiliated by V.T.U Belagavi | Recognized by Govt. of Karnataka

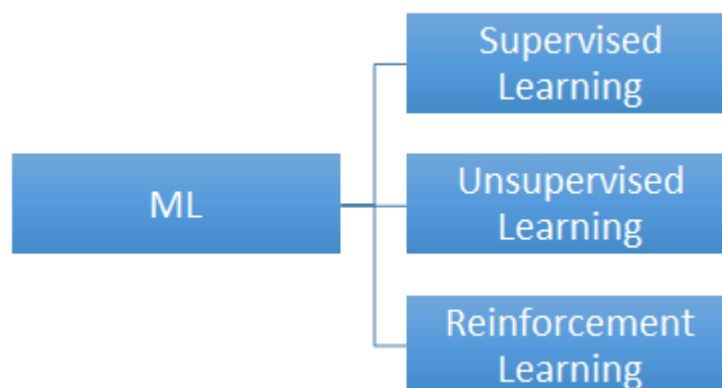**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

ML Applications :
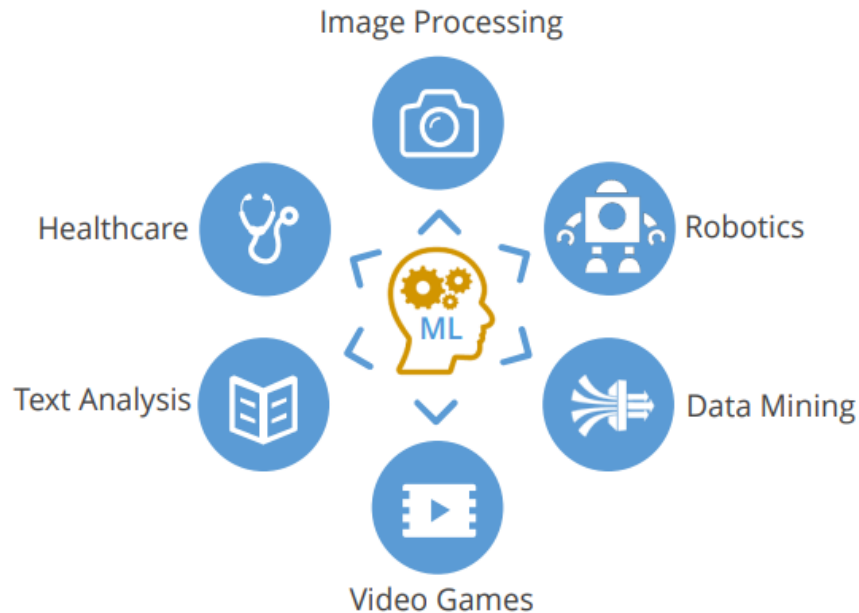
- A common example of the use of machine learning is Netflix's series recommendations. If your Netflix account has been designated as a consistent watcher of a specific show, you will be recommended shows that Netflix thinks you will enjoy in the future. How does this happen?

Types of Machine Learning :

Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANGERE
Approved by AICTE | Affiliated by V.T.U Belagavi | Recognized by Govt. of Karnataka

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Supervised Learning :

- Supervised Learning is a type of machine learning used to train models from labelled training data.
- It allows you to predict output for future or unseen data.
- Supervised Learning is the most basic type of machine learning.
- A model is presented with a dataset that has labelled input and output pairs.

Example 1: Weather Apps

- The predictions made by weather apps at a given time are based on prior knowledge and analysis of weather over a period of time for a particular place.

- Examples of Supervised Learning (Contd.) -Example 2: Gmail Filters
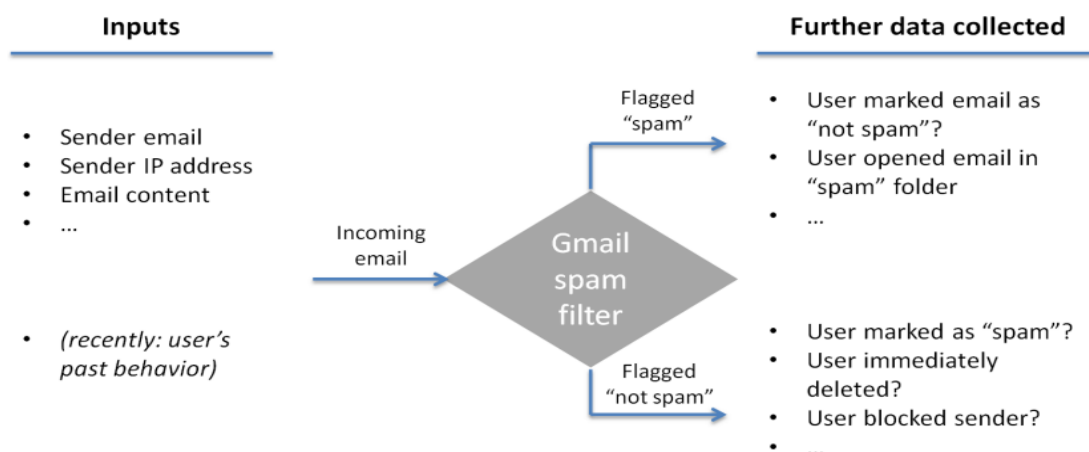
Srishyla Educational Trust (R), Bheemasamudra

**GM INSTITUTE OF TECHNOLOGY, DAVANGERE**
Approved by AICTE | Affiliated by V.T.U Belagavi | Recognized by Govt. of Karnataka

NATIONAL BOARD of ACCREDITATION
Accredited Programs
CSE/ECE/CE/ME/ISE/BT

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

- Netflix uses supervised learning algorithms to recommend users the shows they may watch based on the viewing history and ratings by similar classes of users

Regression Model
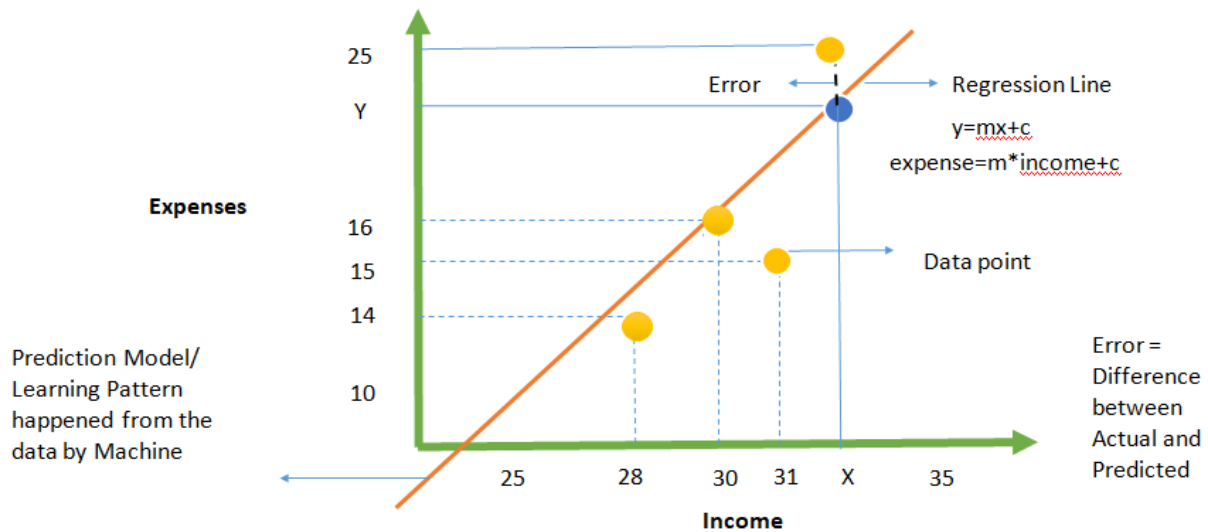
- Different metrics to represent the regression model for the errors :

   Metric1

   $$e1^2+e2^2+\ldots\ldots+en^2$$

   Here n is number of datapoints

   e1,e2…… errors

- Here sum of squared errors (SSE) will be used to represent the goodness of the regression model.

- As negative errors may appear it required squaring the errors

   Metric2

- Squareroot $(e1^2+e2^2+\ldots\ldots+en^2)/n$

- Square root of sum of Square of errors and divide with n- Root mean square error

   Metric3

   Ie1I+Ie2I+…………IenI

   Modulus of error means removing negative of error

   This is Mean absolute error

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Few glimpses of the Technical talk

TECHNICAL TALK ON MACHINE LEARNING

Finally the Head of the Department thanked and appreciated the resource person Dr.Maheswari L Patil for accepting our invitation and engaging with the technical talk. Students were benefited with the session and pro-actively participated in the questionaries.