**Numericals**  
[Eigen Values and Eigen Vectors in Machine Learning || Dimensionality Reduction in Hindi 2021](https://www.youtube.com/watch?v=4q28ywG0RZM)

[Hebbian Learning Algorithm with Solved Example](https://www.youtube.com/watch?v=GeUucTdrQa0)

[Support Vector Machine (SVM) Algorithm - Javatpoint](https://www.javatpoint.com/machine-learning-support-vector-machine-algorithm)

[EM algorithm: how it works](https://www.youtube.com/watch?v=REypj2sy_5U)

[McCulloch-Pitts Neuron — Mankind’s First Mathematical Model Of A Biological Neuron | by Akshay L Chandra | Towards Data Science](https://towardsdatascience.com/mcculloch-pitts-model-5fdf65ac5dd1#:~:text=Inhibitory%20inputs%20are%20those%20that,x_3%20is%20an%20inhibitory%20input)\

[MLmods](https://docs.google.com/document/d/17kH_Dl9n6th0agfYHxdSZDoWSfSKgbxbKC4C4Okxwp8/edit)

SVM & PCA :- V.V.IMP

Module 1:-

1. Issues in ML

2.Diff b/w or short note on Supervised & Unsupervised ML

3. Confusion matrix & all Performance measures

Module 2:-

Numerical on Eigenvalues and distance bw vectors, OV vectors, OP, Diagonalization, SVD

SN on SVD & its application.

Module 3:-

SVM

Short note on Linear regression., Regression for classification

Module 4:-

Short note on:-

Hebbian Learning Rule

EM algo for clustering

Module 5:-

Numerical on MP model(building any gates)

Numerical on perceptron(adjusting weights)

SN on Error back Propagation

SN on Logistic regression

Module 6:-

SN on Curse of Dimensionality & Feature selection and feature extraction

Principal Component Analysis