

## Machine-learning-2 on Jupiter

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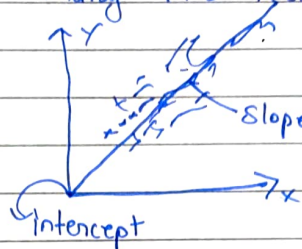
### → M-L-3 Assignments:-

- 1.) M-L is something about a prototype or model with certain algorithms used to predict some values w.r.t information provided by us.  
→ Business analytics & Medical efficiency two applications.  
→ Ethical issues with M-L can be biasness, accuracy, wrong prediction, overfitting & underfitting.
- 2.) (i) Under the supervision of experts growth can be much, dependency is there to experts {learning}  
(ii) With the assistance of experts in indirect manner?  
→ person can handle most of their issue, think accordingly, but sometimes direction may differ.  
(iii) Self-education → it can take time, but efficiency is best.
- 3.) Examples of M-L → stock prediction, visibility prediction etc.
- 4.) A well defined Learning Problem is like
  - (i) class of tasks.
  - (ii) The measure of Performance.
  - (iii) The source of experience.
- 5.) Well not in all cases, but certainly M-L can automate the process which can give more productivity.



7) There can be many M.L Techniques (Algorithms),

(i) Linear Regression,



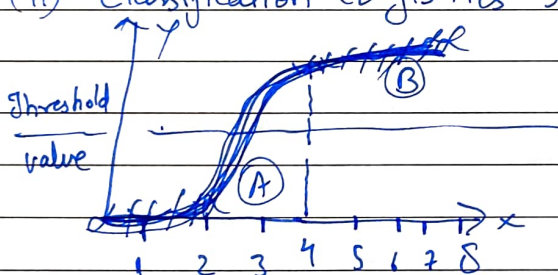
$$h_{\theta} = \theta_0 + \theta_1 x \quad \text{or } y = mx + c$$

→ it simply creates the best fit line b/w the points by checking different minimas & finally finds global minima using diff.  $\theta_0$  &  $\theta_1$  values.

8) There are different like regression and classification,

(i) In regression as we discussed on 7<sup>th</sup> questions.

(ii) Classification (Logistics regression)



In this sigmoid function lower the  $h_{\theta}$  value to 0 or 1 so, it automatically comes as binary points, A threshold points separates them.

9) Supervised Learning - Refer 8.2

→ Unsupervised learning is when there is a form of data present but not labelled (Pattern is not there)

ex → DBSCAN, K-means Clustering.

10) (i) Simple linear. R refer to 7.1

(ii) Deep learning in Healthcare → it can be good bcoz in H.C most of the time while doing experiment pattern is not there so, what if pattern can also be automated.