**Planner**

Machine Learning , B.sc. hons 6th sem , session 2021-2022, January 2022 to April 2022

Teacher name : Dr. Nidhi Arora

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| S.no. | Topic | Months | Plan |
| 1 | Basic definitions  | January 2022 | Classroom lectures, Assignment 1 |
| 2 | Hypothesis space and inductive bias |
| 3 | Bayes optimal classifier and Bayes error, Naive Bayes classifier |
| 4 | Curse of dimensionality, dimensionality reduction, feature scaling, feature selection methods |
| 5 | Linear regression with one variable, linear regression with multiple variables  |
| 6 | Gradient Descent | Feb 2022 | Class Lectures,Practicals,Student Presentation |
|  7 | logistic regression, over-fitting, regularization. performance evaluation metrics, validation methods |
| 8 | Decision trees  |
| 9 | k-nearest neighbor classifier  |
| 10 | perceptron, multilayer perceptron, neural networks, back-propagation algorithm  | March 2022 | Class Lectures,Practicals,Student Presentation |
| 11 | Support Vector Machine (SVM), Kernel functions |
| 12 | Approaches for clustering, distance metrics, K-means clustering, expectation maximization, hierarchical clustering |
| 13 | performance evaluation metrics | April 2022 | Class Lectures,Practicals,Student PresentationPrevious year question paper discussion |
| 14 | validation methods |