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| **WORK PLAN (Odd Semester Jan-April 2021)**Paper Name: Machine LearningCourse: B.Sc.(H) Computer Science ( VIth Semester)Teacher Name: Dr. Nidhi Arora |
| **S.No.** | **Month** | **Content** |
| 1 | Jan 2020  | IntroductionConcept of Machine Learning, Applications of Machine Learning, Key elements of Machine Learning, Supervised vs. Unsupervised Learning, Statistical Learning: Bayesian Method, The Naive Bayes Classifier Softwares for Machine Learning and Linear Algebra Overview Plotting of Data, Vectorization, Matrices and Vectors: Addition, Multiplication, Transpose and Inverse using available tool such as MATLAB/R Language. Practical Lab for R  |
| 2 | Feb 2020 |  Prediction using Linear Regression, Gradient Descent, Linear Regression with one variable, Linear Regression with multiple variables, Polynomial Regression, Feature Scaling/Selection.Practical Exercises on Linear RegressionAssignment 1 |
| 3 | March 2020 |  Logistic Regression Classification using Logistic Regression, Logistic Regression vs. Linear Regression, Logistic Regression with one variable and with multiple variables. Regularization Regularization and its utility: The problem of Overfitting, Application of Regularization in Linear and Logistic Regression, Regularization and Bias/Variance. Practical Exercises on Logistic Regression and RegularisationAssignment 2 |
| 4 |  April 2020 | Neural Networks : Introduction, Model Representation, Gradient Descent vs. Perceptron Training, Stochastic Gradient Descent, Multilayer Perceptrons, Multiclass Representation, Backpropagation Algorithm.Practical excersises on Neural networks |