DETAILED SYLLABUS

Week	Content
Week 1	**Basic Python Programming:** Python Basics, Operators, Loops, Functions, Strings, List, Tuples, Dictionary, Set, Object-oriented concepts (OOPs), f-strings, lambda functions etc
Week 2	**Libraries:** Numpy, Pandas, Matplotlib, Sklearn, Seaborn.
Week 3	Introduction to Machine Learning: Supervised and Unsupervised Machine Learning, Algorithms, Reinforcement Learning, Classification Tasks, Clustering Tasks
Week 4	**Data pre processing and cleaning:** Data Preprocessing, Dealing with Missing Data, Handling Categorical Data, Splitting a Dataset in Training and Test Sets
Week 5	Mathemtical Analysis, Stochastic Gradient Descent, Hyper parameter tuning, Regularization, Bias vs Variance, Gradient Descent, Stochastic Gradient Descent, Batch Gradient Descent, Mini Batch Gradient Descent, Hyper parameter tuning, Regularization, Bias vs Variance
Week 6	**Machine Learning Algorithms:** Linear Regression, Logistic Regression, Decision Trees, Naïve Bayes Classifier, Support Vector Machine, Clustering, K-means clustering, Agglomerative clustering.
Weet 7 (O)	**Machine Learning & Data Science project:** Real Estate Price Prediction Project
Week 8 (O)	