Machine Learning Curriculum

Course Overview:

Learn A-Z everything about ML From the basic to advanced.

What You Will Learn:

- Basic fundamentals of Machine learning.
- Data exploration, data preprocessing, handling missing values.
- Feature engineering and exploratory data analysis.
- Data visualization techniques.
- Descriptive and inferential statistics .
- Cross – validation techniques.
- Model selection, model training, model evaluation and model prediction.
- Supervised learning, Unsupervised learning and Reinforcement learning.
- Regression, Classification, Clustering, Association rules.
- Linear regression, Logistic regression, Support vector machine, Naïve bias algorithm, Decision tree, Random forest, K-nearest neighbors and others.
- Ensemble learning – bagging and boosting.
- K-means, DBSCAN, Hierarchical clustering.
- Content based filtering and Collaborative filtering.
- Recommendation system and its working process.
- Adaboost, XGboost, Catboost, Gradient boosting, etc.
- Deep learning and Neural networks.
- Perceptron, Artificial neural networks, Feed forward neural network.
- Back-propagation algorithm.
- Weights, bias and tradeoff.
- Overfitting and underfitting.
- Activation functions, optimizers and loss / cost functions.
- Epochs, step per epochs, batch size, val epochs, learning rate, etc..
- Project management, development and deployment.
- Web scraping techniques.
- API development using DeepLearning framework.
- Working with sklearn, TensorFlow, Pandas, Numpy, Matplotlib, Seaborn, Plotly.
- Hands on experience in real world projects.
- Machine learning interview questions.
- Machine learning mock interview preparation.
- Helping resume creation.

Requirements:

- Carry your own laptop with decent configurations

- ❖ Knowledge about Python programming language

Syllabus:

Section	Topic
1	**Introduction of course**
2	**Fundamental of Machine learning**
3	**Data exploration & Feature engineering techniques**
4	**Data visualization**
5	**Supervised learning**
6	**Ensemble learning**
7	**Unsupervised learning**
8	**Reinforcement learning**
9	**Deep learning**
10	**Additional knowledge**