MACHINE LEARNING COURSE CURRICULUM

SL.NO	DESCRIPTION	DATE & TIME
	Induction Session	**06/05/2024 Class time & Link will be sent to you on 5th"**
1	Introduction to Machine Learning Overview of machine learning, types of machine learning algorithms, & supervised learning.	10/06/2024 9:00 PM- 10:00 PM
	Linear Regression: Simple linear regression, multiple linear regression, and model evaluation.	
2	**Outcome-driven Project: Students will work on a supervised learning project using scikit-learn during the live session.**	12/06/2024 9:00 PM- 10:00 PM
3	**Outcome-driven Project: Students will work on a linear regression project using scikit-learn during the live session.**	14/06/2024 9:00 PM- 10:00 PM
4	Classification: Logistic regression, K-Nearest Neighbors, & model evaluation. Decision Trees: Introduction to decision trees, Gini index, and Information gain.	15/06/2024 6:00 PM- 7:00 PM
5	**Outcome-driven Project: Students will work on a classification project using scikit-learn during the live session**	18/06/2024 9:00 PM- 10:00 PM
6	**Outcome-driven Project: Students will work on a decision tree project using scikit-learn during the live session.**	20/06/2024 9:00 PM- 10:00 PM
7	Random Forest: Introduction to random forests, bagging, & boosting. Unsupervised Learning: Introduction to unsupervised learning, clustering algorithms, and K-Means clustering.	22/06/2024 9:00 PM- 10:00 PM
8	**Outcome-driven Project: Students will work on a random forest project using scikit-learn during the live session.**	24/06/2024 9:00 PM- 10:00 PM
9	**Outcome-driven Project: Students will work on an unsupervised learning project using scikit-learn during the live session.**	26/06/2024 9:00 PM- 10:00 PM
10	Dimensionality Reduction: Introduction to principal com ponent analysis (PCA) and t-Distributed Stochastic Neighbor Embedding (t-SNE) Support Vector Machines (SVM) : Introduction to SVM, kernel functions, & model evaluation	28/06/2024 9:00 PM- 10:00 PM
11	**Outcome-driven Project: Students will work on a dimensionality reduction project using scikit-learn during the live session**	05/07/2024 9:00 PM- 10:00 PM
12	**Outcome-driven Project : Students will work on an SVM project using scikit-learn during the live session.**	09/07/2024 9:00 PM- 10:00 PM
13	Neural Networks: Introduction to neural networks, backpropagation algorithm, & activation functions. Deep Learning: Introduction to deep learning, convolutional neural networks (CNNs), Recurrent neural networks (RNNs).	11/07/2024 9:00 PM- 10:00 PM
14	**Outcome-driven Project : Students will work on a neural network project using TensorFlow during the live session**	13/07/2024 6:00 PM- 7:00 PM
15	**Outcome-driven Project (1 hour): Students will work on a deep learning project using TensorFlow during the live session.**	16/07/2024 9:00 PM- 10:00 PM
16	Natural Language Processing (NLP): Introduction to NLP, text preprocessing, and bag-of-words model. Time Series Analysis: Introduction to time series data, time series decomposition, and ARIMA model.	18/07/2024 9:00 PM- 10:00 PM
17	**Outcome-driven Project : Students will work on an NLP project using scikit-learn during the live session.**	20/07/2024 6:00 PM- 7:00 PM
18	**Outcome-driven Project : Students will work on a time series analysis project using statsmodels during the live session.**	23/07/2024 9:00 PM- 10:00 PM
19	Ensemble Learning: Introduction to ensemble learning, bagging, boosting, and stacking. Model Deployment: Introduction to model deployment, Flask, and Heroku.	25/07/2024 9:00 PM- 10:00 PM
20	**Outcome-driven Project : Students will work on an ensemble learning project using scikit-learn during the live session.**	30/07/2024 9:00 PM- 10:00 PM
	Outcome-driven Project : Students will deploy one of their previous projects to Heroku during the live session.	