

BE Third YEAR IT - AS2025 CTE309 - Machine Learning Module Delivery Workplan				
Month	Week	Date	Topic	Remarks
July	1	21-27	0. Discuss and explain the module descriptor and assessment, enroll students in VLE 1.1 Introduction to Machine Learning (ML) including Deep Learning 1.2 Types of learning: unsupervised, supervised and reinforcement learning	
July/August	2	28-3	1.3 ML pipeline, Importance and application of ML 1.4 Pre-processing: define, and deal with missing and categorical data	28 First Sermon of Lord Buddha
August	3	4-10	1.5 Variable: dependent and independent variable intuition 2.1 Feature selection, supervised and unsupervised	Conceptual Presentation
	4	11-17	2.2 Feature scaling and normalization- min-max scaling and standardization 2.3 Dimensionality reduction- PCA and LDA 2.4 Feature engineering- encoding categorical variables	
	5	18-24	3.1 Introduction to regression and type of regression: linear and nonlinear 3.2 Regression models: Simple Linear Regression, Multiple Linear Regression, Polynomial Regression, Support Vector for Regression (SVR), Decision Tree Regression, and Random Forest Regression	
	6	25-31	3.2 Regression models: Simple Linear Regression, Multiple Linear Regression, Polynomial Regression, Support Vector for Regression (SVR), Decision Tree Regression, and Random Forest Regression	Progress presentation
September	7	1-7	3.2 Regression models: Simple Linear Regression, Multiple Linear Regression, Polynomial Regression, Support Vector for Regression (SVR), Decision Tree Regression, and Random Forest Regression 3.3 Evaluating regression model performance: RMSE, R-squared and Adjusted R-squared	
	8	8-14	4.1 Overview of classification and type of classification models: Linear and nonlinear 4.2 Classification models: Logistic Regression, K-Nearest Neighbours (K-NN), Support Vector Machine (SVM), Kernel SVM, Naive Bayes, Decision Tree Classification, Random Forest Classification	12-15: Mid Term Test Quiz
	9	15-21	4.2 Classification models: Logistic Regression, K-Nearest Neighbours (K-NN), Support Vector Machine (SVM), Kernel SVM, Naive Bayes, Decision Tree Classification, Random Forest Classification	Term Paper Report Submission
	10	22-28	4.2 Classification models: Logistic Regression, K-Nearest Neighbours (K-NN), Support Vector Machine (SVM), Kernel SVM, Naive Bayes, Decision Tree Classification, Random Forest Classification	23: Blessed Rainy Day

Sept./Oct.	11	29-5	4.3Evaluating performance, parameters setting, fine tuning: Cross Validation - Training and Test, True positive and False-negative, confusion matrix, CAP analysis	12: Dassain
October	12	6-12	5.1Intuition: Neural Network and Deep learning. 5.2Layers: input, hidden, and output layers. 5.3Activation functions, loss functions, and optimizers.	
	13	13-19	5.4Artificial neural network, Convolutional Neural Network, and Recurrent Neural Network.	
	14	20-26	5.4Artificial neural network, Convolutional Neural Network, and Recurrent Neural Network.	MiniProject Presentation.
Oct./Nov.	15	27-2	5.5Generative AI – fundamentals, prompt engineering, and Generative Adversarial Network (GAN).	1: HM's Coronation Day
November	16	3-9		
	17	10-12		11: Birth anniversary of 4th King

Monday

2

Tuesday

4

0 hours on Government Hoildays