

Class – X			Subject – Artificial Intelligence	
S. No	Month	No of Working Days	Name of the Chapter/Topic to be Covered	
1	APRIL / MAY	23	Part-A Employability Skills	Communication Skills-II
			Part-B Subjective Skills Unit -1-Revisiting AI Project Cycle & Ethical Frameworks for AI	1.1 AI Project Cycle The overview of the six stages of the AI Project Cycle
				1.2 Introduction to AI Domains The three domains of AI and their applications
3	JUNE	8	Part-B Subjective Skills Unit 2. Advanced concepts of Modeling in AI	1.3 Ethical Frameworks of AI 2.1 Revisiting AI, ML and DL Frameworks Ethical frameworks Need of Ethical Frameworks for AI Factors that influence our decision-making Types of Ethical Frameworks Bioethics and its principles A use case of Bioethics Differentiate between AI, ML and DL Common terminologies used with data
				2.2 Modelling Types of AI models –Rule based, Learning based Categories of Machine learning based models – Supervised, Unsupervised and Reinforcement learning models Sub-categories of Supervised Learning Model – Classification, Regression Sub-categories of Unsupervised Learning Model – Clustering, Association
4	JULY	25	Part-A Employability Skills	Self-management Skills-II

			Part-B Subjective Skills Unit 3: Evaluating Models	3.1 Importance of Model Evaluation What is evaluation? Why do we need a model evaluation?
				3.2 Splitting the training set data for Evaluation What is Train-test split? Why do we need to do Train- test split?
				3.3 What is Accuracy and Error? Accuracy Error
				3.4 Evaluation metrics for classification What is Classification? Classification metrics Confusion matrix Accuracy from Confusion matrix Precision from Confusion matrix Recall from Confusion matrix F1 Score
				3.5 Ethical concerns around model evaluation Bias Transparency Accountability
5	AUGUST	23	Part-A Employability Skills	Information and Communication Technology Skills - II
			Part-B Subjective Skills Unit 4: Statistical Data	4.1 No code AI for Statistical Data Meaning of No-Code AI No-Code and Low-Code. Some no-code tools 4.2 Statistical Data: Use Case Walk through Important concepts in Statistics. Orange data mining AI project cycle in Orange data mining (Palmer penguins case study)
6	SEPTEMBER	24	Part-A Employability Skills	Entrepreneurial Skills- II
			Part-B Subjective Skills Unit 5: Computer Vision	5.1 Introduction to Computer Vision CV open-source tool A Quick overview of computer vision Computer Vision and Artificial Intelligence Computer Vision v/s Image Processing

				<p>5.2 Applications of CV</p> <ul style="list-style-type: none"> Facial Recognition Face Filters Google Search by Image Computer Vision in retail Self-Driving cars Medical Imaging Google Translate App
				<p>5.3 Computer Vision Tasks</p> <ul style="list-style-type: none"> Classification Classification + Localisation Object Detection Image Segmentation Basics of Images and Pixels Resolution & Pixel Value Grayscale & RGB Images Classification Classification + Localisation Object Detection Image Segmentation Basics of Images and Pixels Resolution & Pixel Value Grayscale & RGB Images
				<p>5.4 No-Code AI tools</p> <ul style="list-style-type: none"> Introduction to Lobe Teachable Machine Smart Sorter Activity Orange Data Mining Tool Use Case Walkthrough Steps to project development
				<p>5.5 Image Features</p> <ul style="list-style-type: none"> Introduction to image features Examples Conclusion
				<p>5.6 Convolution</p> <ul style="list-style-type: none"> Convolution What is Kernel?
				<p>5.7 Convolution Neural Network</p> <ul style="list-style-type: none"> Introduction Convolution Layer Rectified Linear Unit Pooling Layer Fully Connected Layer

				5.8 Python libraries in Computer Vision TensorFlow Keras OpenCV Applications of OpenCV
7	OCTOBER	20	Part-A Employability Skills	Green Skills- II
			Part-B Subjective Skills Unit-6 Natural Language Processing Unit-7 Advance Python	6.1 Introduction to NLP Features of natural language Computer language Importance of NLP
				6.2 Applications of Natural Language Processing Voice Assistants Autogenerated captions Language translation Sentiment analysis Text classification Keyword extraction
				6.3 Stages of Natural Language Processing (NLP) Lexical Analysis Syntactic Analysis Semantic Analysis Discourse Integration Pragmatic Analysis
				6.4 Chatbots Differences between a Script bot and a Smart bot
				6.5 Text Processing Text Normalisation Bag of words TFIDF Applications of TFIDF
				6.6 Natural Language Processing: Use Case Walkthrough Examples of code and no-code tools Applications of Sentiment Analysis Sentiment Analysis using the Orange Data Mining tool
8	NOVEMBER	23		Advance Python
9	DECEMBER	18	REVISION	
10	FEBURARY	23	REVISION	
11	JANUARY	24	REVISION	