

SYLLABUS PLAN FOR THE SESSION 2020-2021

SUBJECT – Artificial

Intelligence

CLASS- 10

MONTH	CHAPTER	SUB TOPICS	INNOVATIVE PEDAGOGIES	LEARNING OUTCOMES	AI LAB ACTIVITIES
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March/ April	INTRODUCTION TO AI	Let's Get Started Session: Introduction to AI and related terminologies. <ul style="list-style-type: none"> Introducing AI, ML & DL. Introduction to AI Domains (Data, CV & NLP) AI Ethics	Group Discussion	To let the students analyse the advantages and disadvantages of Artificial Intelligence	Teachable Machine
May	AI Project Cycle	Problem Scoping Data Acquisition Data Exploration Modelling Evaluation	Case Study- Kimchi Rising Prices- Art Integrated Activity	Identify the AI Project Cycle framework.	AI for Oceans
July	ADVANCE PYTHON*	Recap NUMPY PANDAS MATPLOTLIB	Programming with Python Art Integrated- Data Visualization	Learn basic programming skills through gamified platforms.	Python Programming
August	Data Science	Applications of Data Science KNN algorithm	AI Project Cycle on Food Wastage	Learn how data is important in AI systems.	SystemMaps

September	Computer Vision	Applications of Computer Vision, CNN	Advance python programming using opencv Art Integrated- Pixel Activity	Understand and appreciate the concept of Neural Network through gamification.	Using opencv
October	Natural Language Processing	Applications, Process, algorithms	Edge Detection Activity	Understand , decipher and read the natural language.	LUIS
November	Evaluation	Confusion Matrix	Prediction calculation	Evaluation of algorithms	Semantris

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***Art Integrated Activities**

1.Topic: AI Project Cycle- Food Wastage

Chapter Topic	AI Project Cycle
Subject integrated	Maths and Visual art, Science
Art form integrated	Sketching on graphs
Learning objectives	<ul style="list-style-type: none"> ➤ Analyzing the data ➤ Understanding of dataset ➤ Visualization of Data
Procedure	<ol style="list-style-type: none"> 1. Applying AI Project Cycle 2. System Maps

2. AI Project Cycle

Topic	Kimchi- Rising Prices
Subjects integrated.	Maths, Science and Visual art.
Art form integrated	
Learning objectives	<ul style="list-style-type: none"> ➤ Predicting the prices ➤ Analyzing the data ➤ Understanding of dataset Visualization of Data
Procedure	1. AI Project Cycle to Kimchi – Rising Prices Applying AI Project Cycle Downloading the dataset Analyzing the dataset Data Visualization

3. Sports Integrated activity

Chapter	Neural Network
Subject integrated	Maths, Sports and Visual art.
Learning Objectives	How to select student for sports team
Procedure	Applying Neural Network

Art Integrated Project work under Ek Bharat Shrestha Bharat Programme

Topic of the project	AI Project Cycle on Food Wastage
Subjects integrated	Maths, Art and Science

Time duration	August
Learning Objectives	<ul style="list-style-type: none"> ➤ Designing System Maps ➤ Analyzing the data ➤ Understanding of dataset Visualization of Data
Basic Knowledge of the project:	Applying AI Project Cycle
Knowledge of the terms:	➤ Data Visualization
About the activity	Wastage of Food in Restaurant
Project Presentation	Presentation of the data collected could be through PPT or by video.