Bhartiya Vidya Mandir Senior Secondary School

Sector-39, Chandigarh Road, Ludhiana

SYLLABUS OF CLASS IX

BOOK : NCERT	SUBJECT – ARTIFICIAL INTELLIGENCE			SESSION - 2024-2025
Month	**Unit/Chapter/Topic**	**Learning Objective**	**Resources/Art-integarted pedagogy tools used/ E-Resources**	**rning Outcomes/ Skills Learnt by Students**
APRIL	**AI Reflection**	To identify and appreciate Artificial Intelligence and describe its applications in daily life	https://aidemos.microsoft.com/luis/demo	Know about the AI impacts in daily life
		To recognize, engage and relate with the three realms of AI: , Computer Vision, Data Statistics and Natural Language Processing.	https://next.rockpaperscissors.ai/	Know about computer vision , statistics and natural language processing.

MAY	**AI PROJECT CYCLE**	Identify the AI Project Cycle framework.	Lecture Method	Introduction to AI Project Cycle ● Problem Scoping ● Data Acquisition ● Data Exploration ● Modeling ● Evaluation ● Deployment
		Learn problem scoping and ways to set goals for an AI project.	Smart Board	**Activity: Brainstorm around the theme provided and set a goal for the AI project. ● Discuss various topics within the given theme and select one. ● Fill in the 4Ws problem canvas and a problem statement to learn more about the**
		Identify stakeholders involved in the problem scoped.	Interactive Panel Used	Brainstorm on the ethical issues involved around the problem selected.
		Identify data requirements and find reliable sources to obtain relevant data.	Interactive Panel Used	Data Acquisition Activity: Introduction to data and its types. ● Students work around the scenarios given to them and think of ways to acquire data. Activity: Data Features ● Identifying the possible data features affecting the problem. Activity: System Maps ● Creating system maps considering data features identified.
		To understand the purpose of Data Visualisation	https://datavizcatalogue.com/	Data Exploration/ Data Visualisation ● Need of visualising data ● Ways to visualise data using various types of graphical tools.

		Understand modeling (Rulebased & Learning-based)	Lecture Method	Modeling ● Introduction to modeling and types of models (Rule-based & Learning-based)
		Understand various evaluation techniques.	Practical Implementation	Evaluation Learners will understand about new terms ● True Positive ● False Positive ● True Negative ● False Negative
		Challenge students to think about how they can apply their knowledge of deployment in future AI projects and encourage them to continue exploring different deployment methods.	https://www.moralmachine.net/	**Activity: Implementation of AI project cycle to develop an AI Model for Personalized Education.**
	AI ETHICS	To gain awareness around AI bias and AI access.	Lecture method	AI Bias and AI Access ● Discussing about the possible bias in data collection ● Discussing about the implications of AI technology
JUNE	**SUMMER HOLIDAYS**			
JULY	**Basics of Data Literacy**	Define data literacy and recognize its importance Understand how data literacy enables informed decisionmaking and critical thinking ● Apply the Data Literacy Process Framework to analyze and interpret data effectively ● Differentiate between Data Privacy and Security ● Identify potential risks associated with data breaches and unauthorized access. ● Learn measures to protect data privacy and enhance data security	https://public.tableau.com/en-us/s/download	Basics of data literacy ● Introduction to Data Literacy ● Impact of data Literacy ● How to become Data Literate? ● What are data security and privacy? How are they related to AI? ● Best Practices for Cyber Security

	Acquiring Data, Processing, and Interpreting Data	● Determine the best methods to acquire data. ● Classify different types of data and enlist different methodologies to acquire it. ● Define and describe data interpretation. ● Enlist and explain the different methods of data interpretation. ● Recognize the types of data interpretation. ● Realize the importance of data interpretation	https://www.datawrapper.de/	• Types of data • Sources of data • Best Practices for acquiring data • Features of data and Data Preprocessing • Importance of Data Interpretation • Tools used for Data Interpretation
AUGUST	**Project Interactive Data Dashboard & Presentation**	Data visualization & its importance • Visualization of data with a No-Code tool • Create a simple and interactive chart with a No-Code tool	https://www.youtube.com/watch?v=NLCzpPRCc7U	Data visualization & its importance • Visualization of data with a No-Code tool • Create a simple and interactive chart with a No-Code tool
SEPTEMBER	**TERM EXAMINATION**			
OCTOBER	**MATH FOR AI (Statistics & Probability)**	Analyzing the data in the form of numbers/images and find the relation/pattern between the them. Use of Math in AI.	Lecture Method	Importance of Math for AI ● Finding Patterns in Numbers and images. ● Uses of Math - ○ Statistics ○ Linear Algebra ○ Probability ○ Calculus
NOVEMBER	**Probability**	Understand the concept of Probability in real life and explore various types of events.	Lecture Method	Use of probability in different AI applications
DECEMBER	**Introduction to Generative AI**	• Definition and Overview • Applications and Use cases	Lecture Method	Students will be able to define Generative AI & classify different kinds
JANUARY	**INTRODUCTION TO PYTHON**	Learn basic programming skills through gamified platforms.	Through Practical work	● Introduction to Python language ● Introducing python programming and its applications