AI FOR STUDENTS

ΔI Tinkerer

INTERMEDIATE | ADVANCED | BEGINNER

	Theme	Learning Objectives
1	Features of an Artificial Intelligent system	Hands on experience session for better understanding of AI features such as Camera Vision, Machine Learning, Natural Language Processing etc.
2	How did the idea of AI begin?	Explore where and how the idea and concept of AI began and work on an AI program that will use computer vision tools such as image and text recognition to identify the faces and shapes of numbers from a series of image data.
3	Weather Forecast	Create an AI program that incorporates regular expressions to access the weather information of different places around the world.
4	What makes a machine 'Artificially Intelligent' ?	Explore the classifications of Intelligence and how to define a system/robot as 'Artificially Intelligent'. Create a text-based "smart conversational agent" program to carry out Text Classification through word extraction and comparison processes.
5	Steps in the Development of AI	Explore the stages involved in AI development through developing an image classification program that uses perception to recognize emotions from images and display human-like reactions.
6	Machine Intelligence & Human Intelligence	Discuss the types of AI used in daily life and compare the differences between Human and Machine intelligence by exploring how an AI machine would process words and colors.
7	Understand what is AI composed of – What is the model behind AI systems	Create an AI program that utilizes Sense Perception to study how AI helps Robots in navigation.
8	Perform an analysis of Architecture of AI (Structure & Types of Agents in AI) through the following activities:	Develop an AI game that uses ML to recognize Hand Gestures and labels them into appropriate actions.
9		Create code for a program to identify the Age and Gender of human faces through perception and computer vision.
10		Build an Emotion Recognition System to evaluate human faces using computer vision.
11		Create code for a "Face Tracker" System program which combines computer vision and Machine Learning features.
12	Coded Bias: Part 2	Learn and discuss how facial recognition technology and AI algorithms identify bias in a training dataset, and extend the training set to address the bias.
13 14	Capstone Projects	Design and work on own projects that incorporate AI to solve a problem using the PBL (Project Based Learning Framework). Instructors will guide the students using the Design Thinking philosophy.