AGES 14 - 18

AIINNOVATOR



	Theme	Learning Objectives
1	Explore different & current Al technologies	Create code for a "Face Tracker" System program which combines computer vision and Machine Learning features.
2	Image Classification & Facial Recognition	Learn and discuss how facial recognition technology and Al algorithms identify facial features in a training dataset.
3	Al Digital Library	Explore how an Al-Library enables users to work with machine learning models without worrying about infrastructure issues, model complexity or any data science expertise.
4	Al & Cryptography	Train a computer to understand secret code words to guide a spy and Teach a computer to recognize speech.
5	Create an Al emotion engine	Create a program to teach a computer to recognise compliments and insults.
6	Create an Al Obstacle avoidance game	Create a game that learns how to avoid the obstacles and teach a computer to play a game.
7	Create an Al program to solve math problems using neural networks	Create a Al program that can solve mathematical problems using Artificial Neural Networks.
8	Create an Al Avatar	Explore how AI avatars can communicate with people with the help of Natural Language Processing (NLP) algorithms.
9	Create an Al Voice User Interface	Explore the working of Alexa, Siri and other conversational agents, and interpret how they grasp user intent. Create an Al Voice User Interface (VUI) program that will perform voice-driven basic arithmetic operations and calculations.
10	Create & testing an evolvingAl game agent	Develop a real time game with an Al which will evolve throughout the game play. This Al will eventually learn to play the game without being
11		programmed explicitly.
12	Coded Bias: Internet Privacy	Learn and discuss how facial recognition technology and Al algorithms identify bias in a training dataset, and extend the training set to address the bias.
13	Capstone Projects	Design and work on own projects that incorporate Al to solve a problem using the PBL (Project Based Learning Framework). Instructors will guide the students using the Design Thinking philosophy.
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