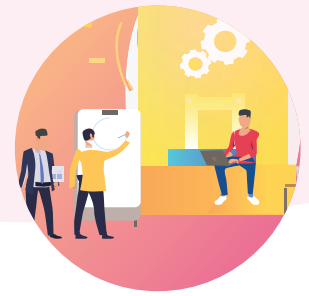




SCRATCH AND ARTIFICIAL INTELLIGENCE

During these classes, students are given a quick overview of Scratch programming interface using a movie making project and a game project. They are then introduced to the basics of Artificial intelligence concepts and terms. The students then learn to train machine learning models to recognize text, voice and image commands and use the same models to create projects in Scratch platform.

SESSION	CONCEPT	SKILLS
01	Overview Of Scratch Interface	Numeracy, Creativity, Logic Understanding scratch interface and program sprite to move in positive and negative direction. Making an animation scene.
02	Sprites	Pattern Abstraction, Decomposition Animate a scene by changing sprite costume and background. Create a Dance Party Animation Scene.
03	Algorithms & Scene Building	Pattern Abstraction, Decomposition Use the broadcast method to make an interactive animation between multiple sprites.
04	Movie Making - I	Problem Solving, Resilience Identifying errors in the given code.
05	Movie Making - II	Decomposition, Creativity, Logic Debugging Code and Editing scenes to create a meaningful movie sequence of a Tom and Jerry Movie.
06	Events & Game Design - I	Decomposition, Creativity, Logic Creating a Clicker game in Scratch using either mouse or keyboard for communication.
07	Events & Game Design - II	Decomposition, Creativity, Logic Creating a Clicker game in Scratch using either mouse or keyboard for communication.



08	Conditionals - I	Pattern Abstraction, Decision Making Using loops and conditionals while making a simple animation. Learning about nested if. Building entertaining games using learnt concepts in Scratch.
09	Conditionals - II	Pattern Abstraction, Decision Making Using loops and conditionals while making a simple animation. Learning about nested if. Building entertaining games using learnt concepts in Scratch.
10	Formative Assessment	Assessment Of Learning

TEXT RECOGNITION

11	Introduction To Artificial Intelligence	Step-wise Thinking , Decomposition Planning steps of instructions, Responding to creative and logical thinking questions.
12	History Of AI	Step-wise Thinking Planning steps of instruction before writing code.
13	How Does AI Work?	Logic , Decomposition Planning steps of instructions, Responding to creative and logical thinking questions.
14	Text Recognition-I	Decomposition, Creativity, Logic Using the concept of AI , build an emotion detector robot.
15	Text recognition - II	Decomposition, Creativity, Logic Using the concept of AI , build an emotion detector robot.

Learning Path For YOUNG LEARNERS



16	Chatbots	Decomposition, Creativity, Logic Using the concept of AI , build a chat bot.
17	Events and Text Recognition-I	Decomposition, Creativity, Logic Using the concept of AI , build a smart room.
18	Events and Text Recognition-II	Decomposition, Creativity, Logic Using the concept of AI , build a smart room.

VOICE RECOGNITION

19	Storyboarding	Decomposition, Creativity, Logic Using the concept of voice recognition, create a story or quiz game.
20	Voice Recognition-I	Decomposition, Creativity, Logic Give voice commands to an Alien to perform various activities.
21	Voice Recognition-II	Creativity, Logic Train the computer to understand secret code words. Tell your commands to a spy for guiding it around a town.
22	Formative Assessment	Assessment Of Learning



IMAGE RECOGNITION

23	Image Detection, Recognition	Problem Solving, Resilience Learning about using AI for Feature Extraction, Object Detection and Classification.
24	Image Classification With Machine Learning	Problem Solving, Resilience Learning about how Image Recognition Technology Actually Works?
25	Introduction to Teachable Machine	Creativity, Logic What is the model "learning"?
26	Image Recognition-I	Creativity, Logic Train a computer to recognise color of a picture.
27	Image Recognition-II	Creativity, Logic Train a computer to recognise color of a picture.
28	Face Recognizer	Creativity, Logic Create a face recognizer App using the AI technique.
29	Shy Panda	Creativity, Logic Teach the machine to identify images. Understand the trained model as the 'Image Classifier'.
30	Formative Assessment	Assessment of learning