ADVANCED CURRICULUM (GRADES 4-6)

Build full Entrepreneur-ready Games, Apps, Websites and AI/ML Models

Class 1-48 | Game Design and Basic App Development
- Game Development
  - Students learn basics of programming while designing simple and complex arcade games.
    - Sequence
    - Events
    - Variables
    - While Loops

- Basketball game
  - Design a single player basket ball game.

- Basic App Development
  - Students will learn how to build native apps and publish them on PlayStore.
    - GUI
    - Recursive Loops
    - Alpha/Beta Test
    - Conditional Loops

- Native App
  - Build a Health Statistics app

- Utility Apps
  - Students will learn how to build advanced utility apps.
    - Functions
    - Maths
    - Event Listeners
    - App publishing

- Communication & Cloud based Apps
  - Students will learn to build advanced chatbots and cloud based apps.
    - Intents
    - AI Basics
    - Keyword Mapping
    - Cloud Database

- AI Chatbot
  - Build a Personal Chatbot Assistant

Class 49-96 | Web Applications and UI/UX Design
- UI/UX Design
  - Students will learn how to build static websites with customized UI/UX
    - Palette
    - App components
    - Logo Design

- Personal Website
  - Build a static personal website.

- Front End Development
  - Students will learn Web Design with Advanced Libraries
    - HTML v5
    - CSS v3
    - Javascript
    - ES2020
    - Bootstrap v4.1

- Responsive Portfolio Website
  - Build a responsive portfolio website using Bootstrap library.

- SpaceTech Simulations
  - Students will learn to build interactive space simulation apps.
    - Canvas
    - Libraries
    - Maths

- Gravity App
  - Students will simulate the effect of gravity on free falling objects on different planets.

- Full Stack Development
  - Students will design and code real-life applications with Cloud Database Integration
    - UI/UX
    - Web Design
    - Local Storage
    - Google Firebase

- Twitter for Kids
  - Build your own social microblogging site.

Class 97-144 | Artificial Intelligence based Applications
- NLP
  - Students will learn how to convert speech into text and vice versa at real time
    - Voice
    - Text

- Speech Recognition App
  - Build an intelligent Alexa like AI machine.

- Neural Networks
  - Students will learn how to train models and maths behind the same.
    - Layers
    - Training Models
    - Classification
    - Google TensorFlow

- Emotion Recognition App
  - Build a app with pre trained model to detect human emotion.

- Digital Processing
  - Students will learn what happens at the backend of image recognition algorithms via building hands-on projects.
    - Tensors
    - Image Data
    - Image Classification

- Image Recognition App
  - Using Neural Networks to build filters like Snapchat.

- Machine Learning
  - Students will explore some of the most popular Artificial Intelligence concepts and create fun-filled applications.
    - AI Control Flow
    - Object Identification
    - Feature Extraction

- Applied AI
  - Apply several Neural Networks to build a world class AI product App or game.