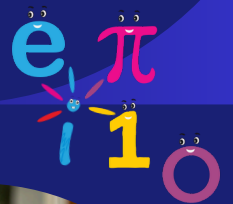




# Explore Learn Create



**AI & Coding4AI**  
For Grades 4 to 10



# Group A – Grade 4,5,6

## ✓ Week 1

- Introduction to AI
- Machine Learning Basics
- Types of Machine Learning: Supervised vs. Unsupervised
- Pattern Recognition: How does AI use patterns to identify faces, spam emails, or even health conditions?
- AI in Self Driving Cars
- Project: Build Your Own Image Recognition Model

## ✓ Week 2

- What is Generative AI?
- AI Art & Images Using Midjourney
- AI Music & Audio
- AI Video Generation
- How Midjourney Works?
- Project: Create a short movie using multi model GenAI Tools

## ✓ Week 3

- What is NLP?
- What is a prompt? Why does wording matter?
- How ChatGPT Works
- Project: Build a Chatbot

## ✓ Week 4

- Improve Academics with AI Tools
- Project: Build No Code App Powered by Generative AI

## ✓ Week 5

- What is Python? Print your first message
- Variables & Data Types
- Simple Math with Python
- Strings & Text Fun
- Project Day: My Python ID Card

## ✓ **Week 6**

- If-Else Statements
- Comparison Operators
- Nested If & Else
- Input from User
- Project: Build a Mini Quiz

## ✓ **Week 7**

- While Loops
- For Loops
- Lists
- Loops with Lists
- Project: Fruit Basket Game

## ✓ **Week 8**

- Functions – Basics
- Functions with Parameters
- Combine All: Input + Condition + Loop + Function
- Final Project Idea: "My First Smart Assistant"



# Group B – Grade 7,8,9

## ✓ Week 1

- Introduction to AI, intro to AI platforms such as Chat GPT and NotebookLM
- Understanding Data : why its needed, how its gathered, World of Big Data. Basics of AI in working – Data , Patterns and Algorithm
- Machine Learning – What it is , Types of ML. ( Supervised , Unsupervised , Reinforcement)
- Applications of AI around the Industries , AI Self Driving Cars, Pattern Recognition – Spam mails, Netflix
- Project: Building a Supervised ML Model.

## ✓ Week 2

- What is GenAI , How is Gen AI different from the Traditional AI ?
- How is GenAI Built , AI Art & Images Using Midjourney
- AI Music & Audio
- AI Video Generation, How AI can make voices that sound like real people
- How Midjourney Works?
- Project: Create a short movie using multi model GenAI Tools

## ✓ Week 3

- What is NLP?Text Processing and preprocessing;Syntax and Parsing ; Semantic analysis
- What is a prompt? Why does wording matter?
- How ChatGPT Works, What are transformers?
- Project: Build a Chatbot

## ✓ Week 4

- Improve Academics with AI Tools
- Project: Building an AI website

## ✓ Week 5

- What is Python , Why python – First code : Variables
- Data Types : List , tuples and sets , Operators
- if – else Statment , Match , For and While
- Sample Problems : Simple math with Python and condition problems
- Project: Number Guessing Game ,Todo List Manager



## ✓ Week 6

- Loops – For , While Loops
- Input from users : Small problems
- Functions
- Combine all input : Loops , if-else , functions
- Project: Build Quiz App

## ✓ Week 7

- Python – Classes and Objects
- Python – OOps Concepts – intro
- Inheritance and polymorphism
- Project: Fruit Basket Game

## ✓ Week 8

- Algorithms – Basic algorithms
- Algorithms – complex Algorithms
- Problem Solving
- Final Project: “My First Smart Assistant”



# Group C – Grade 10

## ✔ Week 1

- Introduction to AI : Impact of AI in the world , Applications of AI .
- Understanding How AI is built – What are the Building Blocks , What is Data – How it affects AI
- Machine Learning – What it is , Types of ML ( Supervised, Unsupervised, Reinforcement) : Classification and Regression.
- Top 5 machine Learning algorithms – Linear Regression, Logistic Regression , Decision Trees , Principle Component Analysis, KNN
- Project: Practical Experiment on the Algorithms

## ✔ Week 2

- What is GenAI , How GenAI is different from traditional AI – How is Gen AI built
- How Gen AI creates Images : Diffusion Model , "AI Art & Images Using Midjourney
- Text-to-Speech (TTS) Models, Text-to-Video Models, AI Music & Audio
- AI Video Generation
- Neural Networks
- Project: Create a short movie using multi model GenAI Tools

## ✔ Week 3

- What is NLP : Text Preprocessing, feature Extraction, Text classification & Sentiment Analysis
- What is Prompt engineering , and what are their techniques
- Attention Mechanism – Transformers , How an LLM works
- Types of Neural Network : Illustrations on Different Algorithms

## ✔ Week 4

- Improve Academics with AI Tools
- Project: Building an AI website

## ✔ Week 5

- What is Python , Why python – First code : Variables
- Data Types : List , tuples, sets and Dictionary. Operators
- if – else Statement , Match , For and While
- Solving Few Problems , Solving PseudoCodes
- Project: Password Generator, ATM Simulator



## ✓ Week 6

- Loops – For , While Loops
- Input from users : Small problems
- Functions
- Combine all input : Loops , if-else , functions
- Math and Dates in Python
- Project: Word Counter , Dice Roller

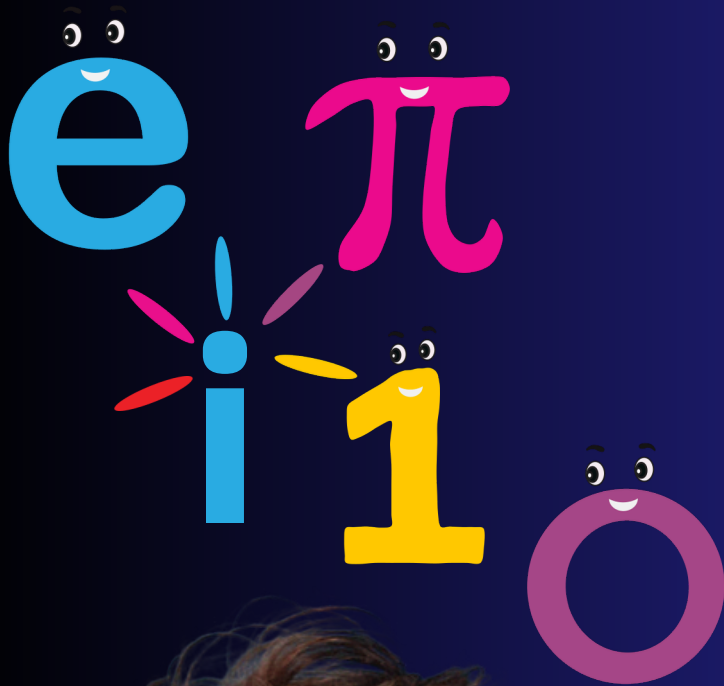
## ✓ Week 7

- Python – Classes and Objects
- Python – OOps Concepts – intro
- Inheritance and polymorphism
- Algorithms – Basic Algorithms
- Project

## ✓ Week 8

- Algorithms – Complex Algorithms
- Python Modules
- NumPy and Pandas
- Final Project : My Personal Weather Reporter





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