Codingal
Where kids love AI & coding

Python & AI Prodigy: From Python Basics to AI Mastery

Grades 6 - 8

Hello ! Young Coders

Get ready to fall in love with AI & coding

Accredited by

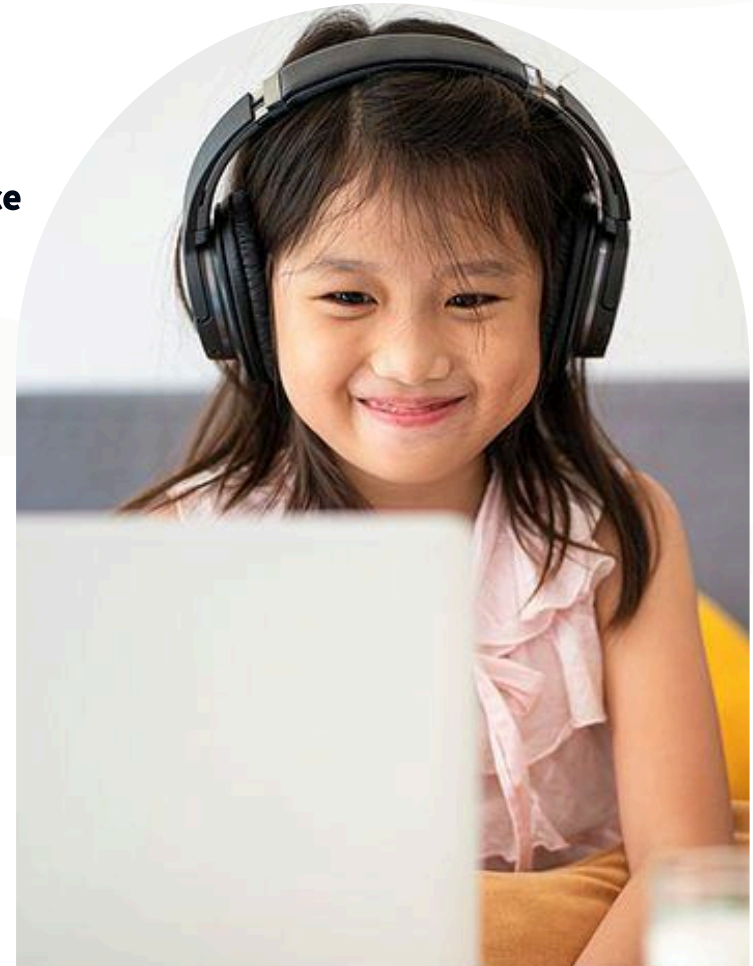
STEM.ORG ACCREDITED EDUCATIONAL EXPERIENCE

Excellent by

Trustpilot

Backed by

Y Combinator



Hugging Face

pandas

git

GitHub

Gemini

TensorFlow

About Codingal

Our Mission: To inspire kids and teens to fall in love with AI & coding

Codingal is a leading online after-school where kids & teens learn AI & coding from expert instructors through live, interactive classes. Our mission is to build the world's largest & most loved programming school for kids & teens, powered by human & AI tutors.

All our instructors come from Computer Science background, and they are rigorously vetted and trained. Every student gets a personalized learning path and individual attention in 1:1 private classes or small group classes with expert instructors. Students learn by building apps, games, animations, and websites in a fun & engaging way.

Kids find Codingal very fun & engaging. They have rated teachers at 4.9 out of 5. Curriculum content is rated at 4.8 out of 5.

Codingal is on a mission to inspire kids to fall in love with AI & coding, and provide the right education to them who will be able to create anything they can imagine and build the future when they grow up to become entrepreneurs, engineers, and scientists.

Codingal empowers kids to become innovators of the future

Why should kids learn AI & Coding?

Coding is the new literacy : Technology has become a core part of our lives, powering everything from websites to smart gadgets. With AI increasingly shaping the future, teaching kids coding and AI prepares them to thrive in a tech-driven world. These skills enable kids to innovate, solve problems, and succeed in a rapidly evolving landscape.

What are the benefits of learning AI & Coding?

Develops problem-solving skills

Boosts analytical and data-driven thinking

Enhances creativity and imagination

Encourages innovative real-life solutions

Builds resilience and adaptability

Why this curriculum?

Accredited by STEM.org

Rated 4.5 out of 5 by students and parents on Trustpilot

Based on BIDE (Broad, Inspiring, Deep and Efficient) model

Focus on STEAM (Science, Technology, Engineering, Arts, Math) subjects

Enhances cognitive, logical, and computational skills

Makes learning highly effective, interactive, and fun

Why learning to code is essential for every child in the age of AI

AI development requires coding

Building AI requires coding, which provides instructions to make the system function properly, ensuring everything runs smoothly and behaves as intended.

Augmenting human creativity

AI serves as a powerful tool for enhancing creativity, helping creators but still relying on human direction to produce unique and meaningful results.

Coding as a foundation for AI literacy

Learning to code is essential for understanding technology, enabling effective communication with computers and empowering individuals to create and innovate.

New jobs & industries

The rise of AI creates new opportunities in various fields, from developing AI tools to maintaining and improving systems, generating demand for skilled professionals.

No-code/low-code platforms

No-code platforms simplify building applications with drag-and-drop tools, but coding knowledge is necessary for creating more customized, complex features and designs.

Python & AI Prodigy for teens

Step into Python and AI! Learn to write smart programs, build interactive games, analyse real data, and create AI apps that see, listen, and understand the world.

96 Classes
96+ Projects
96 Quizzes

Key learnings

- Learn Python Syntax
- Handle Real Datasets
- Code a Game
- Build GUI Apps
- Process Live Video
- Call AI APIs

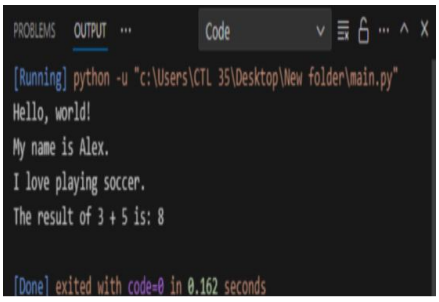
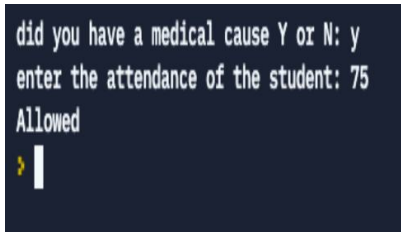
Top achievements

- Build Space Invader
- Visualise Real Datasets
- Detect Faces Live
- Build Voice Assistant
- Classify Text Sentiment
- Launch AI Webapp

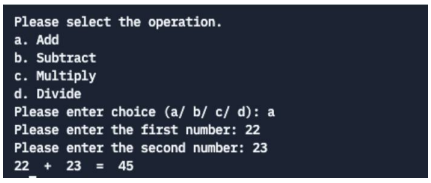
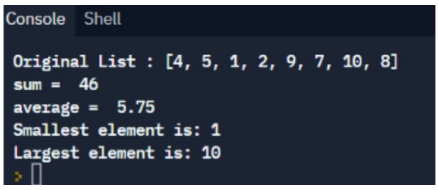
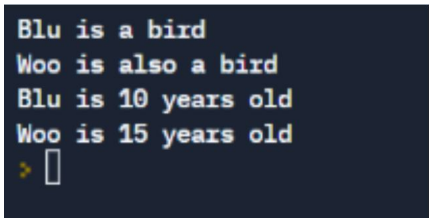
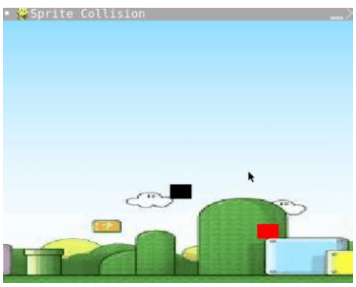
AI Module

Platforms used:
VS Code, GitHub, Hugging Face, MediaPipe, Streamlit, Groq API

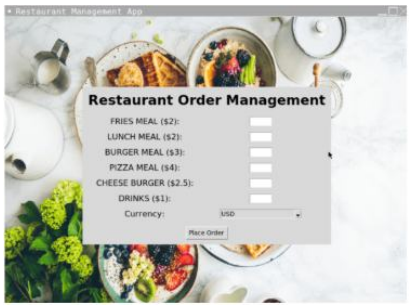
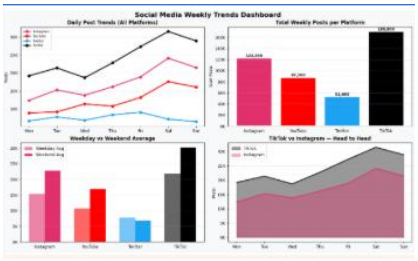
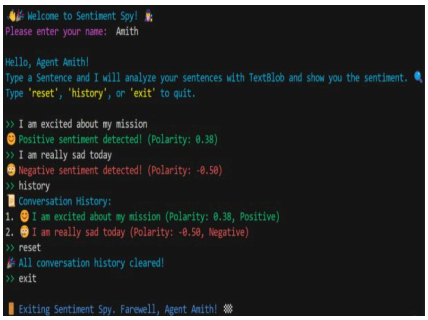
Programming languages:
Python

Module No.	Title & Description	Activity
Module 1	**Python Basics & Dev Setup** Set up VS Code, Git, and GitHub to write your first Python programs. Explore variables, data types, operators, and conditional statements that give you a strong foundation for every lesson ahead.	 Print Statements And Comments
Module 2	**Let's Begin with Loops** Use for loops, while loops, and nested loops to automate repetition and build number patterns. Draw shapes and visual designs using Python's Turtle library in a fun and creative way.	 Exam Eligibility Check

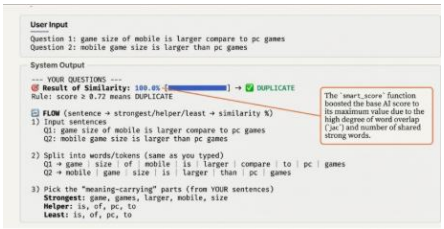
Python & AI Prodigy for teens

Module No.	Title & Description	Activity
Module 3	**Python Functions and Modules** Write reusable code using functions, handle errors with exception handling, and explore Python built-in modules. Work with arguments, recursion, and libraries like Random, Math, and DateTime to build smarter programs.	 Well Wishes
Module 4	**Data Structures in Python** Store and manipulate data using lists, tuples, dictionaries, sets, and arrays in Python. Use list comprehension, advanced functions, and dictionary operations to build interactive programs and tackle Python challenges.	 Lists
Module 5	**Object Oriented Programming** Create classes and objects and apply the four pillars of OOP including inheritance, encapsulation, abstraction, and polymorphism. Build real programs using operator overloading and reinforce your skills through hands-on OOP challenges.	 Classes In OOPS
Module 6	**Game Building with Pygame** Set up a game window, draw shapes, handle keyboard controls, add sprites, and implement collision detection using Pygame. Build a complete Space Invader game from scratch across a two-part project.	 Pygame Window

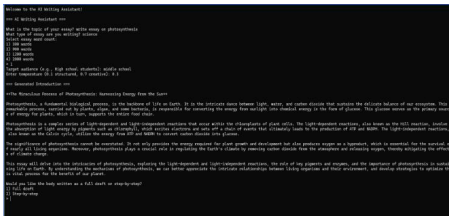
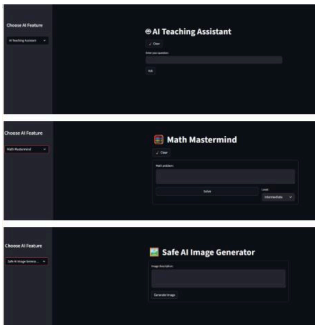
Python & AI Prodigy for teens

Lesson No.	Title & Description	Activity
Module 7	**GUI using Python Tkinter** Design interactive interfaces using Tkinter widgets, geometry managers, and event handling techniques. Apply your skills to build a text editor, denomination calculator, and a restaurant management system from the ground up.	 Tkinter Widgets
Module 8	**Data Analysis with Python** Store and analyse data using NumPy and Pandas, and visualise trends using Matplotlib charts. Work with JSON and CSV files, clean missing values, and uncover insights from real-world datasets.	 Data Visualisations
Module 9	**Introduction to AI** Explore how AI works from data to smart models, build a rule-based chatbot, and create an AI game opponent. Predict handwritten digits and finish with an AI movie recommendation system.	 Sentiment Spy
Module 10	**Visionary AI — Computer Vision with OpenCV** Load, display, and manipulate images using OpenCV to explore the world of computer vision. Annotate images, apply edge detection and Gaussian filters, and build a real-time face detection system.	 Display & Resize Image With OpenCV

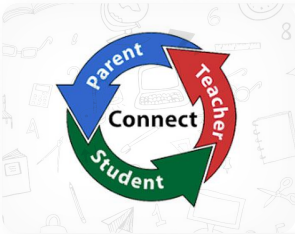
Python & AI Prodigy for teens

Lesson No.	Title & Description	Activity
Module 11	**Gesture AI** Track faces and hand landmarks in real time using MediaPipe and OpenCV to build gesture apps. Control volume, brightness, and scrolling with your hands and create a gesture-controlled photo application.	 Gesture-Based Volume & Brightness Control
Module 12	**NLP with Hugging Face API** Connect Python programs to the internet using APIs and dive into Natural Language Processing. Fetch live data, classify text, analyse sentiment, and summarise content using large language models from Hugging Face.	 Sentiment Analysis Application
Module 13	**Creative Fusion — AI Meets Art and Words** Generate images from text using Stable Diffusion, enhance them with post-processing, and detect objects using Hugging Face. Build an AI-powered project that automatically describes images using vision and language models.	 Generating Images From Text

Python & AI Prodigy for teens

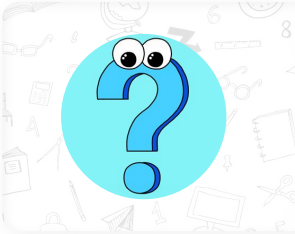
Lesson No.	Title & Description	Activity
Module 14	**Speech Symphony - Talk & Listen with AI** Convert text to speech, capture voice commands, and build an offline voice assistant using Python. Create a real-time speech translation app that listens, translates, and speaks back in multiple languages.	 Talk And Listen
Module 15	**Prompt Playground Mastering AI** Craft clear and effective prompts, explore zero-shot, one-shot, and few-shot learning techniques. Use role-based prompts, manage token limits, and build an AI writing assistant using Groq and Hugging Face APIs.	 Prompt With AI
Module 16	**AI Showcase - Your Capstone Creation** Build interactive web apps using Streamlit connected to Groq and Hugging Face APIs. Create an AI teaching assistant, math problem solver, image generator, and deploy a complete multi-tool AI application.	 AI Teaching Assistant Web App

Top benefits of learning at Codingal



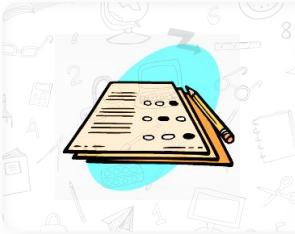
1. Regular PTM

Great opportunity for parents and teachers to open two-way communication and to share insights and information for the holistic development of a child.



2. Regular doubt session

After every module solve all your queries in this personalized session. The toughest problems addressed – concepts revised and doubts cleared!



3. Engaging quizzes

Quizzes are fun and help us remember important facts. These well-targeted and tailor-made quizzes will boost self-esteem and confidence among kids.

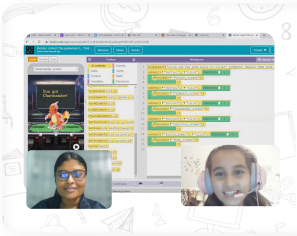
4. Thrilling competitions

Regular competitions are conducted to encourage students to showcase their skills and develop their ideas.

5. Learning Certificates

Show the world what you can do with a certificate for every amazing skill you master.

Top benefits of learning at Codingal



6. Live personalized classes

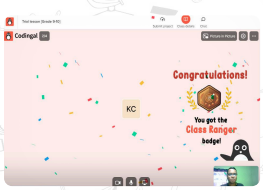
Understand concepts faster with personal attention from teachers. Learn coding from highly qualified teachers trained to make learning effective and impactful.

7. Lifetime access to class videos

Forgot what was taught in the last class? No worries. Watch the recorded class video anytime to refresh your memory.

8. Lifetime access to resources

Get lifetime access to our exclusive learning content including DIY sheets, videos, and other resources.



9. Gamified learning

Codingal makes learning fun with gamification. Students can take quizzes or complete projects to earn points, badges, and rewards.

10. After class projects

For each class, students have the opportunity to complete an after-class project, enabling them to apply what they've learned, test their skills, and receive valuable feedback from their teacher.

Students and parents love Codingal

Ray
Japan

> I love learning with Codingal. It's always fun and the teacher is nice and kind.

Lavanya
India

> The courses develop multiple skills and ensure maximum clarity of coding concepts.

Billie
Kenya

> Codingal classes are so much fun. I've started to really enjoy creating things with code.

Elara Dalton
USA

> I referred Codingal to my friend, and now we're both into coding! She joined the classes too. Plus, Codingal gave me a whole month of free coding classes.

Trustpilot
TrustScore **4.7** | **302** reviews

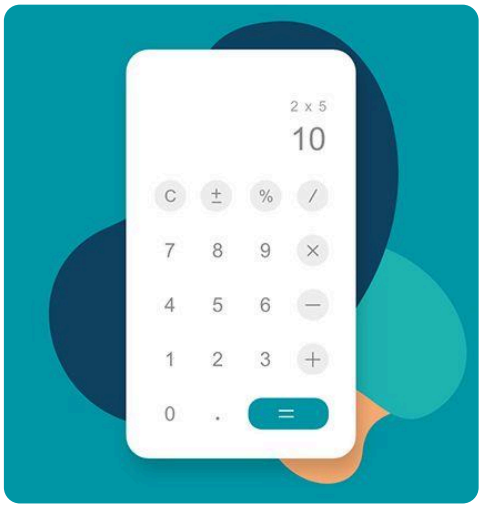
Google
4.6 out of 5

facebook
5 out of 5

Unlock your child's potential in Math & Science with AI and Coding

In Science, AI and Coding enable simulations and data analysis. Students use AI models to predict outcomes in biology, chemistry, and climate science, learning how coding drives scientific discovery and accelerates problem-solving in real-world applications.

Learning AI and Coding help students apply mathematical concepts like linear algebra and statistics to real-world problems. Coding AI models allows them to visualize math, make predictions, and see how math powers data analysis and decision-making.



Our teachers provide individual attention to kids, customize projects based on their interests and make them fall in love with AI & Coding, enabling them to also perform well in other subjects in school.

Foundation of Codingal's curriculum

BLOOM

Bloom's Taxonomy is a standard guideline for K-12 content development, which includes 6 stages of learning: Remember, understand, apply, analyze, evaluate and create.

BIDE

The BIDE (Broad, Inspiring, Deep and Efficient) model has been developed by Codingal in-house to ensure that our curriculum caters to the unique learning style of every child.

STEAM

STEAM is an approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking.

AI & Coding - Gateway to success in the future

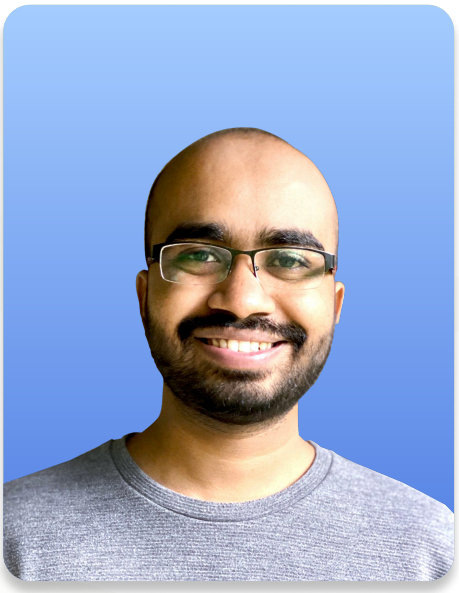
Now is a great time to be entering the coding world because technology will change more in the next 10 years than it has in the last 50.

- Bill Gates

Whether you want to uncover the secrets of the universe, or you just want to pursue a career in the 21st century, basic computer programming is an essential skill to learn.”

- Stephen Hawking

A note from Codingal Founders



Teaching coding and AI to kids is a profound responsibility. Our dedicated educators and meticulously crafted curriculum reflect our deep understanding and commitment to nurturing future innovators.

Vivek Prakash

Co-founder & CEO
B.Tech & M.Tech, IIT Roorkee

LinkedIn

Learning to code is not just about reaching new heights like going to Mars or the moon. Coding, along with AI, equips kids with the skills to think critically and creatively, empowering them at multiple levels.

Satyam Baranwal

Co-founder & COO
B.Tech, IIT Dhanbad

LinkedIn

Begin your child's AI & coding journey today

Is your child ready for the future?

Visit www.codingal.com

Try a free lesson!

Thank You

Built by alumni of

Google amazon

IIT Roorkee IIT Dhanbad

In partnership with

IIT Bombay IIT Guwahati

Hewlett Packard Enterprise BITS Pilani

Accredited by STEM.org

STEM.org ACCREDITED EDUCATIONAL EXPERIENCE

Backed by

Y Combinator REBRIGHT PARTNERS

Got questions? Contact us anytime.

Send us a message

support@codingal.com

Codingal
Where kids love AI & coding