





# Al Expert: Hands-On Al, LLMs & Python







# Enhance Your Understanding of Al with Codingal





### **Master AI Concepts with Practical Learning:**

Unlock a solid foundation in Artificial Intelligence through Codingal's hands-on course. Dive into projects like chatbots and image recognition while learning core Al concepts like machine learning, neural networks, and NLP. Codingal brings Al theory to life, making complex topics accessible and practical. Start your Al Expert journey today!



#### **Build In-Demand Skills with Python and Al**

Gain valuable skills in Python and AI with Codingal's course. From text generation to image interpretation, create real-world applications that harness AI's power. Perfect for beginners or those expanding their expertise, Codingal's course provides in-demand skills that set you apart. Learn and stand out with Codingal.





#### **Step-by-Step Guidance to Create Al-Powered Projects:**

Codingal's course takes you from AI basics to building your own projects, with support every step. Each project adds skills and practical experience, motivating you with real results. Learn to apply AI creatively and confidently, enroll with Codingal to make your AI ideas a reality today!

Our teachers provide individual attention to kids, customize projects based on their interests and make them fall in love with AI & coding, Math, and Science.











### 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 Al & 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 & Al 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.



# 8 Founder's Note



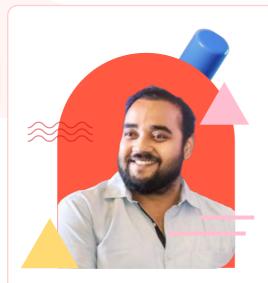


Teaching coding and AI to kids is a profound responsibility. Our dedicated educators and meticulously crafted curriculum reflect our deep understanding and commitment to nurturing future innovators.

### Vivek Prakash

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





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











# Codingal empowers kids to become innovators of the future

## Why should kids learn coding?





Coding is the new literacy.

In recent years, technology has made inroads into all aspects of our lives. We've come to rely on websites, apps and gadgets to help us through the day, be it at work or at home.

Given the enormous role technology is going to play in the future, teaching kids to code is the best way to prepare them for success.



## What are the benefits of learning coding?





- Helps develop problem solving skills
- Boosts analytical and structural thinking abilities
- Enhances creativity and imagination
- Helps find innovative solutions to real-life issues
- Helps develop resilience

## Why this curriculum?



- Accredited by STEM.org
- Rated 4.6 out of 5 by students and parents
- 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











# Foundation of our curriculum

Accredited by



### **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.











### Al Expert: Hands-On Al, LLMs & Python - Overview (1)

Prerequisite: Basic knowledge of Python, including variables, loops, functions, and data structures, is recommended.\*

expert. Whether you're eager to create the next big chatbot like ChatGPT or curious about how AI transforms our world, This Course has everything you need to get started. Make learning Artificial Intelligence fun, relatable, and empowering!

8 Modules 48 Lessons 48 Quizzes 50+ Projects 6 Months Duration



### **Course Learning Outcomes**

- Understand Core Al Concepts
- Explore Computer Vision with OpenCV
- Use Hugging Face for Text Processing
- Create Al Projects with Gemini API
- Develop Prompt Engineering Skills



### **Achievements**

- Master Python for Real-World Applications
- Understand & use Large Language Models
- Design and Implement Interactive Chatbots
- Enhance Problem-Solving and Creativity
- Communicate Effectively with Al Models



#### Module 1

#### **Introduction To Al**

Master fundamentals and explore key Al topics such as machine learning, deep learning, neural networks, and natural language processing. Engage in hands-on projects to apply your Al skills practically.

#### **Key Learning Outcomes**

- Learn Fundamentals of Al
- Understand Key Al Concepts and
- Explore Real-World AI Uses
- Set Up Your Development
   Environment

 Language: Python

Platform:

GitHub, Google Collab

Visual Studio Code, Git

6 Lessons & 6+ Projects

#### Module 2

# Visionary Al: Computer Vision With OpenCV

Explore how AI sees and understands images. Use OpenCV to create projects where AI can recognize, analyze, and creatively manipulate visual data, enhancing your computer vision and image processing skills.

#### **Key Learning Outcomes**

- Learn Image Processing with OpenCV
- Create Al-Powered Visual Projects
- Use Basic Computer Vision methods
- Analyze and Modify Visual Data

Language:
Pvthon

Platform:
GitHub

Market Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects











## Al Expert: Hands-On Al, LLMs & Python - Overview (2)



#### Module 3

# **Getting Started With Image Classification**

This module introduces image classification using OpenCV and machine learning, blending essential Al concepts with hands-on activities to create fun projects like classifiers and facial recognition.

#### **Key Learning Outcomes**

- Build and Train Al Image Classifiers
- Discover Feature Extraction in AI
- Use Machine Learning to Sort Images
- Improve Classification for Accuracy

 Language: Python

□ Platform:
 ☐ BitHub, Hugging Face

Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects



#### Module 4

### **NLP With Hugging Face API**

Explore Natural Language Processing with the Hugging Face API in this module, creating chatbots, story generators, and translators. Each lesson blends AI concepts with handson activities, making learning engaging and fun.

#### **Key Learning Outcomes**

- Use Hugging Face for Text Analysis
- Create Smart Chatbots with GPT
- Apply Text Translation and Generation
- Learn to use Large Language Models

Language:

**Python** 

Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects



### **Unlock AI Enthusiast Certificate**

#### Module 5

# Creative Fusion: Al Meets Art And Words

This module explores the exciting interplay between images and text using AI, transforming words into visuals and images into narratives. You'll master AI-driven image and text generation to create unique projects.

#### **Key Learning Outcomes**

- Turn Text into Al-Generated Images
- Generate Image-Based Narratives
- Use AI for interactive Storytelling
- Explore Creativity with Technology

 Language: Python

Platform:

GitHub, Hugging Face

Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects











## Al Expert: Hands-On Al, LLMs & Python - Overview (3)



#### Module 6

# Speech Symphony: Talk & Listen With AI

Speech Symphony explores Al's ability to understand and generate speech. You'll create voice assistants, convert speech to text, and master Alpowered speech recognition and synthesis through hands-on projects.

#### **Key Learning Outcomes**

- Implement Speech-to-Text with AI
- ✓ Implement Text-to-Speech with AI
- Develop Interactive Voice AssistantsEnhance Al Communication Skills

Language:

Python

Platform:

GitHub, Hugging Face

Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects



#### Module 7

# Prompt Playground: Mastering Al With Gemini

In Prompt Playground, explore prompt engineering with the Gemini API. Learn to craft prompts, optimize responses, and build intelligent applications through engaging projects and hands-on activities.

#### **Key Learning Outcomes**

- Learn Basic Prompt Engineering
- Craft Prompts for Al Responses
- Utilize Gemini API for Projects
- Apply Prompt Engineering in Al projects

### Language:

Python

☐ Platform:
GitHub, Google Al Studio

Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects

#### Module 8

# Al Showcase: Your Capstone Project Creation

In Al Showcase, create your own Alpowered application by applying your knowledge from previous modules. Each lesson provides guidance, ensuring you stay motivated and creative throughout the process.

#### **Key Learning Outcomes**

- Develop Your Own Al Applications.
- Integrate AI Tools and Techniques.
- Showcase Your Creativity and Skills
- Publish Your Al Projects

## Language: Python

□ Platform:

GitHub, Google Al Studio

Tools:

Visual Studio Code, Git

6 Lessons & 6+ Projects



**Unlock AI Expert Certificate** 









# Top 10 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 selfesteem 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 10 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.









# Innovative projects built by Codingal students



**Scary Diego** 

Avyakth

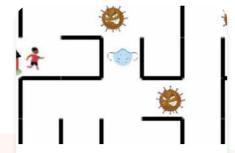
View Project



Victory for the shark

Saifiyah

View Project



Covid 19 game

**Daksh Srivastava** 

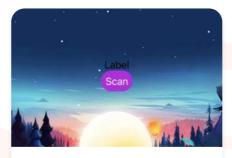
View Project



Tank enemy

**Sharv Nagar** 

View Project



**QR** Code scanner

Sana Tanti

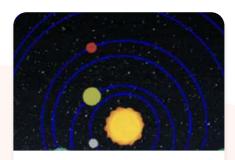
View Project



### **Check-list**

Rudra Agarwal

View Project



Solar system

Samhith Gurajapu

View Project



Frog, snake, and Angel

**Bhavi Tushar Chavan** 

View Project

Hi My Name Is Aarav. This App Calculates Body Mask Index [BMI].If You Want To Calculate Click On This Button.

click Me

#### **BMI** Finder

**Aarav Saggar** 

View Project







# Students and parents love Codingal



Roopa Tanti

Codingal parent

食食食食

Codingal builds a strong foundation and has helped enhance my daughter's confidence and creativity.



Muhammed Umer Azhaan

Codingal Student

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The best thing about learning coding with Codingal is the teachers who always went the extra mile for me.





### Ira Khandelwal

Codingal Student

\*\*\*

I'm glad I picked up coding at an early age as it has improved my logical thinking and sparked my creativity.



### Ikumi

Codingal Parent

食食食食食

Codingal's well-structured courses have made coding fun for my son. They're the best and the quickest.









# 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









# Begin your kid's Al & coding journey

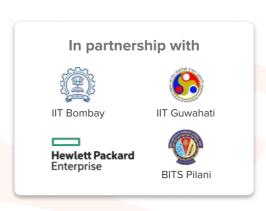
# Is your child ready for the future?

Start their AI & coding journey with Codingal today.



# **Thank You**







Got questions?
Contact us
anytime.

Send us a message



support@codingal.com

