THINKLAND.AI

AI Coding (15+ y/o)

AI Programming 402 – How to Code with AI

Course Description

AI402 is designed to show students how to use AI as a coding partner. The course emphasizes learning through practice, where students explore how AI can help them write, debug, explain, and improve code. Rather than teaching programming from scratch, the focus is on using AI to make coding more approachable, creative, and efficient.

Through guided exercises and project-based learning, students will build small applications while learning how to ask the right coding questions, interpret AI-generated code, and verify results. The course highlights both the strengths and limits of coding with AI, ensuring that students understand when to rely on AI and when to check carefully on their own.

By the end of AI402, students will be able to:

- Write and run simple programs with AI assistance.
- Use AI to explain coding concepts and error messages in clear language.
- Debug and refactor code with AI support.
- Generate documentation, comments, and test cases with AI.
- Build small applications by combining AI-assisted coding with their own ideas.
- Understand the importance of checking accuracy and practicing responsible coding.

Course Structure

AI402 is organized into 16 modules that progress from using AI for short coding tasks to building complete projects. Students begin by learning how to prompt AI effectively for coding, then practice debugging, refactoring, and documenting their work. In the later modules, they use AI to explore libraries and build small applications. The course concludes with a final project where each student creates a program of their own design with AI support.

Who Should Enroll

This course is for students who are curious about programming and want to use AI to make coding more accessible. It is a natural next step after AI400 or AI401 and is well-suited for middle and high school students who want to combine problem-solving, creativity, and technology. No prior coding experience is required, though familiarity with AI basics is recommended.

Curriculum Outline

Module 1: AI as a Coding Partner
Module 2: Writing Your First Code with AI
Module 3: Prompting for Coding Tasks
Module 4: Debugging with AI
Module 5: Learning New Concepts with AI
Module 6: Refactoring and Improving Code
Module 7: Coding Projects with AI
Module 8: Documentation and Comments with AI
Module 9: AI and APIs
Module 10: Safe and Responsible Coding with AI
Module 11: Collaborative Coding
Module 12: Final Project — Build with AI

About: https://school.thinkland.ai/about

Teachers: https://school.thinkland.ai/teacher

Email: contact@thinkland.ai; Wechat ID: ThinklandUS

https://school.thinkland.ai