

AI Foundational Fluency Program – Software Engineering Skills

Experience the power of human expertise combined with AI-driven analysis to drive meaningful organizational change and improvement.

Overview

This AI Foundational Fluency Program is designed to empower professionals with hands-on skills in software development, including prompt engineering, code generation, UI prototyping, and requirements gathering using the latest AI tools. The curriculum is structured as a series of 2.5-hour interactive sessions every other week, complemented by practical assignments and ongoing coaching support between sessions. The program is tailored to the tools that the organization is using daily and structured to ensure that learning and application are not disconnected.

Structure

- Session Frequency: 2.5 hours, every other week
- Format: 12 weeks of live, instructor-led workshops (virtual or in-person)
- Between Sessions: Guided assignments, project work, and asynchronous check-ins with a dedicated coach/trainer
- Target Audience: Professionals involved in the creation of software products

Curriculum Outline

Session 1: Foundations of AI & Prompt Engineering

- Introduction to generative AI and large language models
- Fundamentals of prompt engineering: crafting effective instructions and queries for AI, advanced techniques for technical contexts including chain-of-thought and tree-of-thought approaches
- Hands-on exercises: zero-shot, few-shot, and chain-of-thought, and tree-of-thought prompting
- Assignment: Develop and refine prompts for specific engineering scenarios

Session 2: Requirements Gathering / Planning

- Automating discussion, requirements building, and workflow design
- Using AI for requirements mapping and exploration
- Integrating AI into the planning process
- Assignment: Planning a user story with AI mapping and requirement tools

Session 3: User Experience and UI Design

- Leveraging AI to generate UI / UX prototypes for discussion
- Best practices for using AI to enhance design workflows
- Real-world use cases: from brainstorming to product MVP
- Assignment: Create UI mock ups for multiple stories and share learnings with the cohort

Session 4: AI Coding and Agentic interactions

- Using AI for coding, testing, and exploring code bases
- Prompting AI to generate code, tests, and summaries
- Integrating AI with workflow tools through MCP
- Assignment: Code, Test, and PR a feature leveraging AI and share learnings with the cohort.

Session 5: Platform Engineering

- AI for cloud and on premises platform work and IaC automation
- Introduction to domain specific and context tasks
- Assignment: Create IaC structures for one environment

Session 6: Retrospective and future planning

- Program Retrospective
- Introduction of continuous learning framework
- Assignment: development of a 90-day continuous learning path by each attendee

Between-Session Activities

- Project Work: Participants apply session concepts to their own work tasks, with deliverables reviewed by the coach/trainer.
- Check-ins: Regular asynchronous feedback and troubleshooting via email or chat with the coach.
- Peer Collaboration: Optional group discussions and sharing of best practices.

Learning Outcomes

By the end of the program, participants will:

- Master prompt engineering techniques for a variety of AI models and business applications
- Automate and enhance document and presentation workflows using generative AI
- Analyze and visualize data efficiently with AI-powered tools
- Develop custom AI workflows tailored to organizational needs
- Confidently integrate AI into daily professional practices, driving productivity and innovation

This program is ideal for organizations seeking to upskill teams in practical AI integration, ensuring participants gain actionable skills with ongoing expert support.

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