COURSE SYLLABUS

AI Software Engineering Bootcamp (Self-Paced)

Gain the skills to design, build, and launch AI-powered applications through a structured, hands-on software engineering program.

For more information, visit
https://www.creativelive.com/learning-path/ai-software-engineering-bootcamp-self-paced

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Course Outline

This package includes these courses

- AI Coding Bootcamp with Claude Code Course (Self-Paced) (60 Hours)
- AI Coding for Product and UX (Self-Paced) (60 Hours)
- AI Coding for Security (Self-Paced) (60 Hours)
- AI Coding for Systems and Architecture (Self-Paced) (60 Hours)
- AI Coding Capstone (Self-Paced) (60 Hours)

AI Coding Bootcamp with Claude Code Course (Self-Paced)

Conquer the full process of planning, building, and deploying real web applications with Claude Code in this beginner friendly, hands-on bootcamp featuring interactive practice, seven labs, and a capstone project.

- Direct Claude Code to plan, build, debug, and deploy web applications entirely through natural language
- Navigate the Explore → Plan → Execute → Review workflow to keep multi-step development tasks on track
- Spin up full-stack apps equipped with databases, user authentication, and external API integrations
- Fold in responsive design, accessibility standards, and professional UI patterns
- Anchor your projects in web security fundamentals including input validation and environment variable management
- Ship finished applications to a live URL using version control and modern hosting platforms

AI Coding for Product and UX (Self-Paced)

Explore how product strategy, UX design, and modern development practices come together inside AI-assisted software engineering.

- Apply type-safe development practices using modern programming languages
- Design and construct relational databases and structured data models
- Build and document APIs with thoughtful versioning and error handling

- Conduct user experience research and apply design systems
- Translate product requirements into clear technical specifications
- Write and maintain professional-grade test suites

AI Coding for Security (Self-Paced)

Learn how to secure applications and manage production environments using modern development workflows and AI-focused security practices.

- Work inside team-based development workflows using version control and code review
- Set up continuous integration and deployment pipelines
- Monitor applications with observability and debugging tools
- Apply cybersecurity fundamentals and threat modeling techniques
- Manage authentication, authorization, and sensitive data safely
- Identify and lessen risks that come with AI-powered applications

AI Coding for Systems and Architecture (Self-Paced)

Discover how modern applications are structured, scaled, and fine-tuned by working through the principles of systems design and architecture.

- Apply core computer science concepts to real-world development challenges
- Design scalable systems with modern architecture patterns
- Work through networks, concurrency, and multi-language environments
- Build caching, queues, and background processing workflows
- Deploy applications using cloud infrastructure tools
- Fine-tune performance and keep systems reliable

AI Coding Capstone (Self-Paced)

Cap off the program with a hands-on capstone project that demonstrates your ability to build and ship AI-powered applications.

- Plan and guide an application build from idea through deployment
- Use advanced AI-assisted development workflows and tooling
- Build AI-powered features into applications meant for real users
- Conduct production readiness reviews and thorough testing
- Convey technical work clearly through live demos and written documentation
- Refine a portfolio project ready to share with prospective employers