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)

Use AI to plan, design, and publish a real website, then create and ship your own interactive design system.

- Plan a website with a sitemap, user flows, and wireframes before you design
- Compose responsive layouts from a design system
- Refine a site's motion, images, accessibility, and speed
- Set up contact, SEO, analytics, and a custom domain, then publish to a live URL

- Explore type, color, spacing, and shape, and how they become design tokens
- Direct AI to build and ship your own interactive design system

## AI Coding for Security (Self-Paced)

Partner with AI to understand attacks, secure accounts and cloud services, and catch and stop threats.

- Threat-model a small organization and choose which risks to address first
- Practice common web app attacks safely and know what fixes to ask for
- Secure accounts, logins, secrets, and cloud services
- Spot and test AI-specific threats like prompt injection and over-powered agents
- Triage logs, hunt threats, and write detection rules with Claude Code
- Investigate phishing, harden devices and networks, and run a documented incident response

## 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