COURSE SYLLABUS

AI Software Engineering Bootcamp (Self-Paced)

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

> Group classes in Live Online and onsite training is available for this course. For more information, email corporate@nobledesktop.com or visit: https://www.nobledesktop.com/certificates/ai-software-engineering-bootcamp-self-paced

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Course Outline

This package includes these courses

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

- Use Claude Code as a practical coding assistant for planning, editing, debugging, and shipping apps
- Build confidence with Git, GitHub, and collaborative development workflows
- Understand the structure of modern web apps across frontend, backend, APIs, and deployment
- Create full-stack projects with Next.js, Supabase, authentication, and third-party APIs
- Improve app quality with responsive design, accessibility, testing, and security practices
- Deploy a finished application with environment variables, a custom domain, and launch-ready polish

AI Coding for Product and UX (Self-Paced)

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

- Put type-safe development practices to work using modern programming languages
- Design and build out relational databases and structured data models
- Create and document APIs with thoughtful versioning and error handling
- Run user experience research and apply design systems
- Turn product requirements into clear technical specifications

- Write and maintain professional-grade test suites

AI Coding for Security (Self-Paced)

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

- Operate inside team-based development workflows using version control and code review
- Build out continuous integration and deployment pipelines
- Track applications with observability and debugging tools
- Put cybersecurity fundamentals and threat modeling techniques into practice
- Handle authentication, authorization, and sensitive data safely
- Spot and reduce risks that come with AI-powered applications

AI Coding for Systems and Architecture (Self-Paced)

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

- Bring core computer science concepts into real-world development challenges
- Design scalable systems with modern architecture patterns
- Navigate networks, concurrency, and multi-language environments
- Set up caching, queues, and background processing workflows
- Roll out applications using cloud infrastructure tools
- Tune performance and keep systems reliable

AI Coding Capstone (Self-Paced)

- Plan and execute a full application build from concept to deployment
- Use advanced AI-assisted development workflows and tools
- Integrate AI-powered features into real-world applications
- Conduct production readiness reviews and testing
- Present technical work clearly through demos and documentation
- Prepare a portfolio project for job applications