

# **AI – Personal Based Coding Assistant**

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**Abstract:** *This project presents an AI-Based Personal Coding Assistant developed using Python, Django, Nuxt.js, and Gemini AI 2.0 Flash Lite model, designed to assist developers in generating and improving code efficiently. The system serves as an intelligent, real-time programming companion that understands user queries and provides tailored coding solutions, suggestions, and multiple implementation approaches for the requested problem.*

*The backend, powered by Django and integrated with Gemini AI 2.0 Flash Lite, processes natural language inputs and translates them into context-aware coding responses. The frontend, built with Nuxt.js, offers a modern and interactive interface for seamless user engagement. When a user asks for code, the assistant not only generates functional code snippets but also explains how they work and provides multiple alternative solutions—highlighting the most efficient, scalable, or beginner-friendly approaches based on context.*

*The assistant supports a wide range of programming languages and frameworks, guides on best practices, and evolves through continual learning. It is ideal for both novice programmers seeking guidance and experienced developers looking to boost productivity. Through its AI-driven multi-path suggestion and human-like conversational ability, the system acts as a reliable, always-available coding partner.*

**Keywords:** AI Coding Assistant, Gemini AI 2.0 Flash Lite, Django, Nuxt.js, Python, Code Generation, Natural Language Processing (NLP), Multi-solution Code Suggestion, Real-time Coding Support, AI in Software Development, Intelligent Code Helper, Personal Programming Assistant, Code Optimization, AI-Powered Developer Tool, Full-Stack AI Assistant, Coding Productivity Tool

