

ANKIT CHANDRA KARN

Software & AI Developer

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PROFESSIONAL SUMMARY

IT student and software developer specializing in building practical AI systems, REST APIs, desktop tools, and full-stack web applications. Experienced in developing end-to-end software solutions—ranging from intelligent speech/RAG platforms to C# / .NET desktop applications and FastAPI backend services.

TECHNICAL SKILLS

AI & ML Systems:	Retrieval-Augmented Generation (RAG), Speech-to-Text (STT), Text-to-Speech (TTS), Vector Indexing, Intent Recognition, Wav2Lip Sync
Backend & Frameworks:	FastAPI, Python, .NET / .NET Core, ASP.NET Web API, RESTful API Architecture, Monorepos, JSON APIs
Programming Languages:	Python, C#, Java, C, C++, JavaScript, HTML5, CSS3
Desktop & Embedded:	Windows Forms (WinForms) UI, Java Swing, ESP32 Microcontroller IoT Integration
Databases & Tools:	SQL Server, SQLite, Git, Linux, Postman, Visual Studio, VS Code

KEY SOFTWARE & AI PROJECTS

ANA – Smart AI Receptionist Platform	Python, FastAPI, RAG, Speech AI (STT/TTS), React
- Architected a multi-service AI receptionist monorepo with real-time voice processing and automated query handling. - Implemented a Retrieval-Augmented Generation (RAG) pipeline with custom document indexing for contextual responses. - Integrated Speech-to-Text (STT) and fallback Text-to-Speech (TTS) audio workflows alongside Wav2Lip visual synchronization. - Built async FastAPI REST endpoints connecting web frontend interfaces with background AI processing services.	
MiQ – Desktop AI Assistant	Java Swing, FastAPI, Python
- Engineered a desktop AI assistant supporting voice-triggered commands and intent-based execution. - Designed REST API data exchange contracts between Java Swing UI and Python backend services.	
PharmaCare – Medicine Management System	C#, .NET, WinForms, SQL
Built a desktop inventory and billing application with full CRUD operations, expiry tracking, and SQL database synchronization.	
SmartSchool – School Management System	C#, .NET, WinForms
Developed an administrative desktop tool for managing teacher attendance, leave processing, and scheduling workflows.	
FoodPrint – Recipe & Culinary Web Application	Full-Stack Web Development
Created a recipe discovery platform featuring personalized user recommendations and administrative content management.	

EDUCATION

Bachelor of Computer Applications (BCA) — Kantipur City College (KCC), Purbanchal University 2022 – Present | VIII Semester

HIGHLIGHTS & STRENGTHS

- Proven hands-on experience building functional AI prototypes, speech processing systems, and RAG pipelines.
- Strong software engineering practices: modular codebases, clean API contracts, and object-oriented design.
- Self-driven problem solver skilled in rapid prototype development and cross-domain technology integration.