

# Ankit Raj

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## PROFESSIONAL SUMMARY

- Software Developer with 2+ years of hands-on backend engineering experience.
- Proficient in Python, Java, Go, FastAPI, Gin, Mux PostgreSQL, RAG, and vector search with pgvector/Qdrant. Passionate about scalable and AI applications.
- Strong open-source contribution, owner of one of the most popular libraries in Python called PyWhatKit having 2.5+ million users world-wide, contributed to some other open-source projects as well.

## EDUCATION

### B.Tech, Computer Science and Engineering

Dr. A.P.J. Abdul Kalam Technical University, Ghaziabad

Sept 2020 – Sept 2024

### Summer School on Digital Platform

Aalto University, Helsinki, Finland

Aug 2023

## EXPERIENCE

### Software Engineer

Nextuple India Pvt. Ltd.

Mar 2026 – Present

Bengaluru, India

- Built a Discrepancy Correction API for Supply and Demand services that automatically identified and fixed inventory mismatches, improving data consistency to **99.95%** while completing reconciliation in **under 10 minutes**.

Tech: Go, PostgreSQL, REST APIs, Microservices

- Developed and maintained backend services for inventory and supply chain workflows, collaborating with cross-functional teams to deliver reliable, production-ready features.

### Software Developer

Aveti Learning Pvt. Ltd.

July 2024 – Present

Bhubaneswar, India

- Core member of the engineering team, contributing to system design decisions and mentoring junior developers.

- Engineered and maintained a secure, production-grade backend for a US-based client **Dignifi**, enabling formerly incarcerated individuals to access housing, education, and job opportunities.

Tech: FastAPI, PostgreSQL, JWT Auth, Docker, AWS

- Designed and developed an Info-Search backend system leveraging vector embeddings to enable semantic search across 100K+ educational content items.

Tech: FastAPI, PostgreSQL, pgvector, Sentence Transformers, Python

- Led system design and backend development for a semantic image search application using CLIPViT, indexing 140K+ images and supporting similarity-based retrieval (continued from internship).

Tech: Python, FastAPI, CLIPViT, pgvector, PostgreSQL

- Developed an AI-based attendance system capable of training on a single facial image per student and accurately marking attendance from 3–4 group images of up to 60 students, achieving 94% accuracy and significantly reducing teacher effort.

Tech: Python, OpenCV, Face Recognition, Deep Learning Models

- Designed and implemented an AI-agent-based evaluation system that automatically grades multiple students' answer sheets with high accuracy using provided answer keys as training data.

Tech: Python, LLMs, OCR, Prompt Engineering

- Actively involved in backend architecture decisions, database schema design, performance optimization, and deployment workflows for AI-driven education products.

### Software Development Intern (Long-Term)

Aveti Learning Pvt. Ltd.

Jan 2021 – June 2024

Remote

- Selected for this software development internship in the first year of college based on open-source contributions and creating Pywhatkit.

- Built the **Smart Class App** used by 1400+ schools across Odisha for offline smart board content delivery in low-connectivity environments.

Tech: Python, PyQt, SQLite

- Developed a PPT Translation and review backend used by 1200+ teachers for educational content validation and approval.

Tech: Flask, MySQL, REST APIs

- Indexed and managed 140K+ media files using vector embeddings to support a scalable Document Management System.  
*Tech: PostgreSQL, pgvector, Python, Embedding Models*
- Created an offline e-library system deployed on Raspberry Pi devices, benefiting 600+ rural students with limited internet access.  
*Tech: Raspberry Pi, Linux, Python*

## PROJECTS

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### PyWhatKit GitHub

- Creator and maintainer of PyWhatKit, a beginner-friendly Python automation library with 2.5M+ users worldwide, offering features such as WhatsApp scheduling, YouTube search, ASCII art generation, and text-to-handwriting conversion.  
*Tech: Python, Requests, Flask, OpenCV*

### Deep-Live-Cam GitHub

- Contributed a macOS build fix resolving installation failures on Intel-based systems for a **70K-star** open-source deepfake project, improving cross-platform compatibility and developer adoption.  
*Tech: Python*

### Other Projects GitHub

- **HomeworkMachine**: Built a tool to convert typed text into realistic handwritten notes, used by **10K+ users**.  
*Tech: Python, OpenCV, Image Processing*
- **PhotoCluster**: Implemented a photo clustering system for mobile images using vector embeddings and unsupervised learning.  
*Tech: Python, Go, KMeans, Qdrant, Vector Embeddings*
- **Clipry**: Developed an Electron-based clipboard manager for Linux with fast search and history management.  
*Tech: Electron, JavaScript, Linux*
- **Keystroke Monitoring POC**: Built a keystroke monitoring prototype in a controlled environment to understand OS-level input handling and security considerations.  
*Tech: Python, OS-level Event Handling*
- **Remote Mouse & Keyboard**: Created a Python-based remote input control system allowing mouse and keyboard interaction over the network via QR-based pairing.  
*Tech: Python, Sockets, Web UI, Networking*
- **Socket-TicTacToe**: Developed a minimalist multiplayer Tic-Tac-Toe game focusing on real-time client-server communication.  
*Tech: Python, TCP Sockets, Client-Server Architecture*

## SKILLS

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- **Languages**: Python, Go, SQL, NoSQL
- **Frameworks & Libraries**: FastAPI, Flask, Django, NodeJS, Mux, Gin
- **Databases & Search**: PostgreSQL, MySQL, MongoDB, Redis, Qdrant, Pgvector
- **Messaging & Streaming**: Kafka, RabbitMQ
- **DevOps & Tools**: Docker, Git, GitHub, AWS, Heroku, Linux, Kubernetes, Raspberry-Pi
- **AI & ML**: Vector Search, Embeddings, RAG, LLMs

## ACHIEVEMENTS & CERTIFICATIONS

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- Won **1st Prize** in Hackathons at ADGITM IPU and DTU during college.
- Selected for a **Finland Summer School** trip by Aveti Learning as a reward for hardwork.
- Got a **Job Offer** in the current organization for developing PyWhatKit
- **AI Agents Fundamentals** – HuggingFace
- **Redis AI, Vectors, Streams** – Redis University