Pranav Kumar

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github.com/Pranav322

Profile Summary

Backend developer specializing in API architecture, authentication, and scalable deployments using Node.js, FastAPI, PostgreSQL, and Docker. Built production-grade systems including TheApix streaming backend and RAG chatbot services.

Education

Chandigarh University, Bachelor of Engineering (B.E.) in Computer Science Sept 2022 – May 2026
- Pursuing undergraduate studies with major in Computer Science

Devasthaly Vidyapeeth, Senior Secondary (Intermediate) 2020 – 2022
- Completed senior secondary education with specialization in Science (Physics, Chemistry, Mathematics).

Internship Experience

GradGuide | *LLM Developer Intern (Backend)* May 2025 – Aug 2025
- Developed a RAG-based chatbot API using **FastAPI**, enabling context-aware conversational responses.
- Built a recommendation engine that generated personalized outputs based on user profile details.
- Handled deployment and storage on **Google Cloud Platform (GCP)** for scalable hosting and data management.
- Designed and implemented backend services for the company's internal **CRM system**.

Projects

TheApix — Streaming Platform Backend PlayStore Link
- Built an automated FFmpeg pipeline in Node.js to convert raw uploads into adaptive HLS (m3u8) streams, reducing manual processing time by 70%.
- Integrated Razorpay with JWT refresh-token rotation to automate 48-hour rental access and secure playback authorization.
- Designed a modular MongoDB schema for multi-season content and timestamp-based watch tracking to optimize read performance for streaming clients.

RAG Document Assistant — Retrieval-Augmented QA System GitHub
- Developed an AI-powered document assistant using FastAPI and Gemini 2.5 Flash with consistent sub-2s response times (local + cloud tested).
- Implemented semantic search using PostgreSQL (pgvector) and Sentence Transformer embeddings to retrieve relevant context from large text corpora.
- Built secure document ingestion with chunking + overlap strategy and JWT-based multi-user isolation to maintain context integrity and access control.

Skills

Languages & Frameworks: Node.js, JavaScript, Python, FastAPI, Django, Express.js
Databases & Cloud: MongoDB, PostgreSQL, Firebase, GCP, Docker
Tools & Backend Tech: Git/GitHub, RESTful APIs, JWT, FFmpeg, Razorpay
Soft Skills: Problem Solving, Team Collaboration, Technical Documentation

Extracurricular Activities

- **SIH Finalist:** Built Backend for "Electrade" smart meter energy trading prototype.
- **BFCET 1.0 Winner:** Built Backend for "TeamFinder" student project matching app.