PRANAV KISHAN T Y

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Computer Science undergraduate focused on backend engineering and cloud-native DevOps. Skilled in building high-performance systems, optimizing database latency, and deploying automated CI/CD pipelines. Passionate about scalable software solutions and modern infrastructure.

EDUCATION

Bachelor of Technology - Computer Science and Engineering   2023-2027
Amrita Vishwa Vidyapeetham - Coimbatore, India   **CGPA - 8.69**

- **Relevant Coursework:** Data Structures and Algorithms, OOP, Operating Systems, Computer Networks, Database Systems, Software Engineering, Machine Learning, Computational Intelligence

TECHNICAL SKILLS

- **Languages:** C/C++, Python, Java, JavaScript, TypeScript, SQL
- **Backend and Systems:** FastAPI, Node.js, Express.js, REST APIs, Microservices, System Architecture
- **Frontend:** React.js, HTML, CSS, Tailwind
- **AI and Data:** LLM Integration (MCP), Data Pipelines, Vector Embeddings
- **Databases and Cloud:** SQLite, MySQL, MongoDB, Google Cloud Platform, Supabase
- **Tools and Platforms:** Git, Docker, Linux, Bash, GitHub Actions, Vite

PROJECTS

- **InfoStuffs | [Repo](#) | [Live](#) | [Blog](#) |** React.js, MongoDB, Express.js, Node.js, Vercel, Docker
  Zero-Trust personal information manager ensuring end-to-end privacy via client-side cryptography.
  - Architected a **Zero-Trust security model** using **client-side AES-256** and **PBKDF2**, ensuring the database and backend infrastructure remain blind to plaintext user data.
  - Engineered a **Hybrid Serverless architecture**, unifying **Docker**-based local development with stateless **Vercel Functions** for cost-optimized scaling.
  - Orchestrated a seamless **hybrid deployment strategy**, implementing custom **file-based routing** to bridge monolithic development with serverless production environments.

- **Netwatchpy | [Repo](#) | [PyPI](#) |** Python, SQLite, GitHub Actions
  A cross-platform, installable TUI for real-time network usage monitoring.
  - Refactored SQLite schema from text strings to **Unix Epoch integers**, reducing range query latency by **~40%** via optimized **B-Tree indexing**.
  - Engineered a **fault-tolerant SQLite WAL architecture** to process real-time telemetry and render 24-hour bandwidth metrics **without database locks**.
  - Established a **GitHub Actions CI/CD pipeline** to automate **cross-platform binary builds** and PyPI releases.

- **MCP Agentic Microservice | [Repo](#) |** FastAPI, httpx, Render
  WhatsApp-based AI integration project developed for Puch.AI Hackathon.
  - Deployed an **asynchronous microservice** using **FastAPI** and **httpx**, leveraging **Async I/O** to enable **concurrent**, **low-latency** web access for AI agents via the Model Context Protocol (MCP).
  - Secured the architecture with **Bearer Token authentication** and enforced **robust error handling** logic to validate requests and maintain stability in production.

EXPERIENCE

- **Intel IoT Club - Full-Stack Developer**   November 2025 - Present
  - Appointed as **Project Lead** to oversee the [TNPSC Academy](#) portal, managing the project's handover and ensuring stability during its final lifecycle stage.
  - Implemented **modular components** for the [EasyEPFO](#) payment interface and UI layouts, while resolving **critical hydration errors** on the club's official website.
- **ACM Student Chapter - Member**   May 2025 - Present
  - Engineered a **strictly typed**, **reusable UI component** library using React and TypeScript, resolving **cross-device responsiveness issues** and standardizing the design system across the Chapter and SOC portal.

ACHIEVEMENTS

- Our team **secured 39th place** in the **Puch.AI Hackathon** with over 25,000 participants.
- **Selected** for the **Visteon Scholar Program**, a competitive mentorship initiative for engineering undergraduates.

CERTIFICATIONS AND COURSES

- IETE Docker Workshop | **[CERTIFICATE](#)**
- Google Cloud - Introduction to GenAI | **[CERTIFICATE](#)**
- Google Cloud - Prompt Design in Vertex AI | **[CERTIFICATE](#)**
- Introduction to Distributed SQL and CockroachDB, Cockroach University | **[CERTIFICATE](#)**