Sanskar Kumar

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Summary

Full Stack & Backend Software Engineer (MCA, VIT Chennai - 9.10 CGPA) with hands-on enterprise experience at **Ciena** automating network validation pipelines and production experience architecting **FastAPI, React/TypeScript, Node.js, and 60-table MySQL** systems on **AWS EC2**. Proven track record in REST API design, LLM/RAG integrations, and system optimization.

Experience

Freelance Full Stack Developer | HMTHUNT | Deployed Link - https://www.hmthunt.com/ July 2026 - Present

- Rearchitected the HMTHUNT education platform from scratch, modernizing the existing PHP-based website and backend integration.
- Developed 15+ Python FastAPI endpoints to integrate backend services with the existing PHP application and Ai workflows.
- Developing a modern **ERP application** using React and TypeScript, implementing business workflows and reusable UI components.
- Migrated and validated a **MySQL database with 60 tables** and worked on AWS EC2 deployment using Nginx, PM2 and FastAPI.

Software Engineering Intern (*Ciena*) – **SVT & PV Team** May 2025 - Sept 2025

- Built a **Lab Inventory Management System** and **Traffic Generator** in Python, automating manual test-setup workflows and reducing configuration time by ˜40% across network testing environments.
- Developed a **Network Topology Generator** that parses network designs and outputs structured **JSON configuration scripts**, accelerating test deployment for System Verification and Product Verification teams.
- Automated repetitive telecom validation pipelines, improving lab throughput across **5+ product test environments** and reducing regression cycle overhead.

Projects

Ai EdTech Career Platform | React, Node.js, Express.js, MySQL, Groq Ai, RAG

- Built an Ai-powered platform for mock interviews, interactive quizzes, and personalized learning experiences.
- Integrated Groq LLMs for dynamic question generation, answer evaluation, and contextual Ai-powered Q&A.
- Implemented JWT authentication, role-based access control, and secure REST APIs for user management.
- Developed RAG-based document Q&A, study material management, and dashboards for tracking learning analytics.
- Designed relational MySQL schemas to manage user profiles, interview sessions, quiz results, and learning records.

CodeIgnite - Ai-Powered Browser-Based Web IDE | React, Node.js, Express.js, MongoDB, Gemini Ai

- Developed a browser-based IDE with Monaco Editor and real-time code execution preview.
- Integrated Gemini Ai for intelligent code generation, Ai pair programming, and screenshot-to-code conversion.
- Built an automated Ai testing suite with DOM assertions, detailed test reports, and Ai-assisted error fixing.
- Implemented visual DOM inspection, code diff review, and secure JWT-based user authentication.
- Designed a responsive IDE with multi-file management and interactive development tools for developers.

Technical Skills

Languages: Python, JavaScript, TypeScript, Java, C++, HTML, CSS
Backend: Node.js, Express.js, Django, FastAPI, REST APIs, JWT Authentication
Frontend: React.js, Vite, Tailwind CSS, Bootstrap, HTMX, Alpine.js
Databases: MySQL, MongoDB, SQL, Database Design, Schema Optimization
Ai/GenAi: Groq API, Google Gemini API, OpenRouter API, LLM Integration, RAG, Prompt Engineering
Tools & Cloud: AWS EC2, Git, GitHub, Nginx, Linux, Monaco Editor

Education

Vellore Institute of Technology Chennai Tamil Nadu, India
Master of Computer Applications (MCA) – CGPA: 9.10 / 10 2024 – 2026
Dr Zakir Hussain Institute (ZHI), Patna Bihar, India
Bachelor of Computer Applications (BCA) – CGPA: 8.12 / 10 2021 – 2024

Research & Certifications

Research: Optimized GPT-2 for edge deployment via knowledge distillation, pruning, and INT8 quantization, achieving a 60% model size reduction and 2.4x inference speedup via TorchScript.

Certifications: Cisco Networking Academy: Introduction to Networks & Cyber Security
AWS Academy: Cloud Foundations, ML Foundations
CDAC Chennai: Cloud Infrastructure