AVIJIT PRATAP SINGH

Software Developer • Full-Stack / Backend Engineering

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SUMMARY

Software Developer with hands-on experience building AI-driven and full-stack web applications using React, Node.js, AWS and cloud-native architectures. Skilled in REST API design, LLM integration, system scalability, LLM Integration, distributed caching and performance optimization, with experience delivering low-latency, production-ready systems with measurable impact.

EDUCATION

B.Tech in Computer Science and Engineering
Vellore Institute of Technology, Andhra Pradesh
Expected Graduation: July 2026 | CGPA: 8.51

PERSONAL PROJECTS

AI-Driven Healthcare Symptom Checker | React.js, Node.js, AWS Lambda, API Gateway, Redis, LLaMA

GitHub - github.com/Aviijeet12/healthcare-symptom-checker | Live - hsc.avijitsingh.dev

- Built a full-stack AI symptom-checker using React.js and serverless Node.js on AWS Lambda/API Gateway; processed 1,000+ real world symptom queries with ~85-90% context-aware diagnostic accuracy.
- Integrated Hugging Face Inference Router (OpenAI-compatible, LLaMA-3.1-8B) with production resiliency, including automatic retries, timeout handling, HTTP-429 backoff, and model-load polling.
- Implemented Redis caching with deterministic keys and 24-hour TTL, reducing repeat-query latency and upstream LLM calls under concurrent workloads.
- Delivered secure, server-isolated REST APIs with secret isolation and Vercel proxy routing; achieved <300 ms average response time while preventing CORS and key-exposure risks.

AstraQA - Selenium Script Generator | Next.js, Node.js, PostgreSQL, Prisma, Supabase S3, LLaMA

GitHub - github.com/Aviijeet12/AstraQA | Live - astra.avijitsingh.dev

- Built an AI-driven Selenium script generation platform using Next.js (App Router), Node.js, and PostgreSQL with Prisma ORM, reducing manual test authoring effort by ~60-70%.
- Designed Supabase S3-compatible storage ingestion to process 100+ page knowledge bases per build, improving LLaMA-powered test-case relevance by ~40% versus prompt-only generation.
- Developed modular backend APIs for knowledge-base construction, RAG-assisted LLaMA test generation, and Selenium script synthesis, sustaining <50 ms average PostgreSQL query latency under load.
- Deployed on Vercel with Google/GitHub authentication and background processing, delivering scalable performance under heavy workloads with future multi-LLM extensibility support.

SKILLS

Programming Languages	Java, JavaScript, SQL
Frameworks & Libraries	React.js, Next.js, Node.js, Express.js, HTML5, CSS3
Database & Caching	PostgreSQL, MySQL, MongoDB, Redis
Cloud & DevOps Tools	AWS, GCP, Docker, Git, GitHub, Vercel, Render, Supabase
Backend & APIs	RESTful APIs, Authentication/Authorization, CI/CD Pipelines, Integration Testing
CS Fundamentals	Operating Systems, Computer Networks, DBMS, OOP, Algorithms & Data Structures
Technical Interests	Scalable backend architectures, LLM & RAG applications, DevOps engineering

ACHIEVEMENTS

- Solved 300+ **LeetCode** problems and 400+ problems across platforms (**Codolio**), strengthening algorithmic thinking, data structures, and problem-solving depth.
- Active **GitHub** contributor with multiple production-grade, cloud-hosted full-stack and DevOps projects.

CERTIFICATIONS

DevOps and Agile Thinking - IBM SkillsBuild (2025) | Credential ID: 1SckikiMEo
Generative AI Certification - Oracle (2025) | Credential ID: 1019889110CI25GAIOCP