RAJESH CHOUDHURY

Senior Software Engineer (Full Stack & AI)

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Professional Summary

Senior Software Engineer with 6+ years of experience building full-stack web applications, backend systems, and AI-powered tooling. Experienced in .NET, Python, React, FastAPI, and LLM/RAG-based systems. Worked on healthcare, government, and enterprise platforms with focus on scalable APIs, database optimization, and secure system design.

Core Competencies

Backend Engineering • AI/LLM Systems • RAG Pipelines • Microservices Architecture
FastAPI • ASP.NET Core • React • PostgreSQL • Supabase • Docker • Kubernetes
REST APIs • JWT Authentication • Vector Search • Distributed Systems

Technical Skills

Languages: C#, Python, JavaScript, SQL, Dart (Flutter), VB
AI & GenAI: RAG (Retrieval-Augmented Generation) Pipelines, Custom LLM Solutions, MCP (Model Context Protocol), NLP, Vector Embeddings, Transformers
Frameworks & Tools: Llama.cpp, vLLM, Ollama, Hugging Face, LangChain, Pinecone, Vanna AI
Backend & Platform: ASP.NET MVC, ASP.NET Core, .NET Web API, FastAPI, Flask, Node.js, Docker, Kubernetes, Supabase (Postgres, Auth, Vector Store), REST/SOAP APIs
Frontend & Mobile: React, HTML5, CSS3, jQuery, Vue.js, Next.js
Concepts & Security: Microservices, Row-Level Security (RLS), Cybersecurity Audit, Clean Architecture, JWT Authentication

Professional Experience

Senior Software Engineer *Dec 2025 – Present*
ABI HEALTH *Bengaluru, Karnataka*

- **GenAI/ML Systems:** Built Python/FastAPI automation services processing healthcare claims and clinical workflows, reducing manual processing time by 40% across internal operations.
- **LLM & RAG Systems:** Engineered RAG-based LLM retrieval pipelines using vector embeddings and semantic search to accelerate clinical document discovery and structured data extraction.
- **Secure Scalable Architecture:** Implemented backend services using Supabase, PostgreSQL, and vector storage with Row-Level Security (RLS) for access-controlled data handling.
- **Mobile Application Development:** Contributed to Flutter-based mobile applications and backend integrations for healthcare workflow systems.
- **Containerized Deployments:** Worked with Docker and Kubernetes-based environments for backend service deployment, container orchestration, and scalable application management.

System Analyst *Sep 2023 – Nov 2025*
Attune Technologies *Bengaluru, Karnataka*

- **Full-Stack Engineering:** Built and maintained ASP.NET MVC applications and backend APIs supporting large-scale enterprise workflows.
- **Enterprise Security Implementation:** Implemented JWT authentication and Row-Level Security (RLS) for PostgreSQL-backed applications.
- **Microservices Optimization:** Developed REST APIs supporting 50k+ daily internal transactions across distributed microservices.
- **UI/UX Interactivity:** Worked on frontend improvements using JavaScript, jQuery, and Bootstrap to improve usability and responsiveness.

Software Engineer *Jan 2022 – Aug 2023*
Directorate of Information Technology, Tripura *Agartala, Tripura*

- **Digital Governance Solutions:** Developed government web applications used for public distribution and administrative

workflows across state departments.

- **Secure API Development:** Built secure, production-grade REST & SOAP APIs using .NET Web API, facilitating critical real-time government system integrations for 1M+ citizens.
- **Database Query Optimization:** Optimized complex SQL Server and NoSQL database queries, reducing data retrieval times and query latency by over 45% for high-volume transactions.
- **Mobile Strategy:** Delivered native Android applications using Android Studio to scale digital governance initiatives and expand mobile service accessibility.

Web Developer *Jan 2021 – Dec 2021*
Directorate of Information Technology, Tripura *Agartala, Tripura*

- **Secure Web Applications:** Programmed high-security, compliant ASP.NET web applications utilizing both VB and C# for complex government auditing workflows.
- **CMS Infrastructure:** Architected and managed high-availability Drupal-9 government websites, guaranteeing 99.9% uptime, strict cybersecurity posture, and multi-tier public compliance.

Android Developer *Sep 2020 – Dec 2020*
Ignite Software Technology *Agartala, Tripura*

- **Clean Architecture Implementation:** Developed Android applications using Java and Kotlin following clean architecture principles.
- **API Integration:** Integrated RESTful web services and third-party software development kits (SDKs) to enable high-efficiency, real-time data syncs.
- **App Optimization & Launch:** Spearheaded the successful publication and maintenance of consumer apps on the Google Play Store, ensuring compliance with strict security policies.

Education

Bachelor of Technology (B.Tech) in Computer Science & Engineering *Mar 2017 – Mar 2020*
Techno College of Engineering Agartala *Agartala, Tripura*
Diploma in Engineering in Computer Science & Technology *Mar 2014 – Mar 2017*
Gomati District Polytechnic *Agartala, Tripura*

Certifications & Achievements

- **Google Certified Professional:** Validated expertise in Google Analytics, cloud-native applications.
- **Cybersecurity Auditor:** Certified lead/contributor in rigorous government agency (NISG) Cybersecurity compliance audits.