

VISHAL RANJAN

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EDUCATION

- **Bachelor of Engineering in Computer Science and Engineering** 2021-25
Chandigarh University, Mohali, Punjab CGPA: 7.97
- **Diksha International School, Bhagalpur, Bihar - Senior Secondary** 2020
Central Board of Secondary Education(C.B.S.E) 79%
- **Saraswati Vidya Mandir, Kishanganj, Bihar - Secondary** 2018
Central Board of Secondary Education(C.B.S.E) 90.8%

EXPERIENCE

- **Chimple Learning** Bangalore, India
Software Developer April 2025 – Present
 - Contributed to the backend development of an internal **Operations Console** designed to assist teams with school onboarding, maintenance of partner schools, and coordination with program teams.
 - Implemented and maintained RESTful APIs using **Node.js** and **PostgreSQL** to support workflows such as partner registration, program setup, and school metadata updates.
 - Worked with **AWS Lambda**, **S3**, and **CloudWatch** to automate backend processes, manage media uploads, and monitor system health.
 - Helped build features for user access control, audit logging, and data validation to ensure secure and reliable usage by internal operations teams.
 - Wrote scheduled background jobs and cron-based tasks to automate recurring actions like school data syncs, notifications, and cleanup tasks.
 - Collaborated with frontend developers to define API contracts and supported QA in identifying and fixing backend issues across dev and staging environments.
 - Optimized query performance and indexing in PostgreSQL, contributing to a **35% improvement** in API response times for critical operations.
 - Assisted in managing CI/CD workflows using GitHub Actions and participated in regular code reviews, retrospectives, and sprint planning meetings.
- **LG Soft India** Bangalore, India
Research and Development Intern – C++ Developer June 2024 – April 2025
 - Developed and optimized performance-critical modules in **C++** for LG's webOS platform, improving system responsiveness and reliability across smart TV models.
 - Contributed to the integration of **Amazon Alexa** with webOS by implementing low-level communication interfaces in C++, enabling seamless voice command support.
 - Worked with **multithreading** and **asynchronous event handling** to support real-time voice interactions and media playback synchronization.
 - Ensured robust compatibility across multiple webOS versions (**webOS 25 to 22**), handling device-specific optimizations and edge cases.
 - Collaborated with QA to build automated C++ test suites, reducing regression issues and improving testing efficiency by **40%**.
 - Debugged system-level issues using tools like **gdb**, **valgrind**, and system logs, cutting down issue resolution time by **25%**.

TECHNICAL SKILLS AND INTERESTS

Languages: C++, JavaScript, Python, Java, SQL, Dart
Backend/Dev Tools: Node.js, REST APIs, Git, GitHub, Postman, GitHub Actions
Cloud & DevOps: AWS (Lambda, S3, CloudWatch), Docker, CI/CD, Serverless Architecture
Databases & Caching: PostgreSQL, MySQL, MongoDB, Redis, Firebase
Frontend Tools: React.js
Systems & Utilities: GDB, Valgrind, Linux, Bash, VS Code
Relevant Coursework: Data Structures & Algorithms, Operating Systems, OOP, DBMS, Software Engineering
Areas of Interest: Backend Development, Distributed Systems, System Programming, Cloud Infrastructure

PERSONAL PROJECTS

–Collaborative Code Editor | React, Node.js, Socket.IO, AWS, Supabase, DynamoDB

June 2025 – Present

- * Designed and built a production-grade, real-time code editor with multi-language syntax highlighting using **Monaco Editor** and **Socket.IO**.
- * Enabled room-based collaboration with guest access, live editing, and persistent storage via **DynamoDB**.
- * Developed a modular **microservices backend** using **Node.js** and **Express**, with **JWT** authentication powered by **AWS Cognito**.
- * Deployed stateless services on **AWS ECS Fargate** with containerized infrastructure using **Docker**.
- * Deployed frontend on **AWS S3 + CloudFront**, with monitoring via **AWS CloudWatch** and analytics via **Google Analytics 4**.
- * Focused on cloud-native architecture, emphasizing scalability, modularity, and security best practices.

–AI-Powered Real Estate Agent | Vapi, Supabase, OpenAI, Google Calendar API, Twilio

July 2025 – Present

- * Developed a production-ready **AI voice agent** that interacts with real users over phone calls to handle property buying inquiries in Melbourne.
- * Enabled natural language understanding using **Vapi + OpenAI**, allowing the agent to collect preferences, budgets, and locations through live conversations.
- * Integrated with **Supabase** for multi-agent lead capture, CRM-style data storage, and organization-specific isolation.
- * Connected to the **Google Calendar API** to fetch agent availability and schedule appointments in real-time; used **Twilio** for WhatsApp/SMS follow-ups.
- * Implemented webhook-based post-call logging, state recovery, and fallback/handoff mechanisms for reliability across multi-organization deployments.

CERTIFICATIONS

–AWS Cloud Practitioner Essentials — AWS, April 2025

An introductory certification covering core AWS services, cloud concepts, security, pricing, and support. Demonstrates foundational knowledge of cloud computing and the AWS ecosystem.