Rajan Bansal

Chandigarh, India | bansalrajan553@gmail.com | 7814190485 | Portfolio | linkedIn | Github

Education

Punjab Engineering College, Chandigarh   Nov 2022 – July 2026
- B.Tech in Computer Science and Engineering

Experience

Software Engineer Intern, Cadence Design Systems – Noida, India   Jan 2025 – Apr 2025
- Developed a Qt-based desktop tool to automate CAN frame processing, reducing manual parsing time by 40% and improving data throughput.
- Engineered scalable, multi-threaded modules using C++, Qt, and Linux, boosting application responsiveness under high-load scenarios.
- Automated build pipeline using CMake and Make, reducing manual build errors and improving deployment speed by 25%.
- Partnered with cross-functional teams to optimize app architecture, resolve 15+ bugs, and improve load time by 30%.

Technical Skills

Languages: C++, JavaScript, TypeScript, Java, SQL

Frameworks & Libraries: Node.js, React.js, Spring, Express.js, Qt

DevOps & Tools: Git, AWS, PostgreSQL, Docker, Kubernetes, Jenkins, Postman, Linux

Concepts: DSA, OOP, DBMS, OS, ML, REST APIs, System Design, Microservices

Projects

Ticketing Application   GitHub
- **Tech Stack:** Node.js (Express), TypeScript, PostgreSQL, Redis, Stripe, Docker, Kubernetes, AWS, NATS
- Engineered a full-stack ticketing platform using Node.js, TypeScript, and PostgreSQL, achieving 99.9% uptime and supporting 10,000+ users.
- Integrated Stripe payments, JWT auth, and Redis caching, reducing average API response time by 40% via session optimization.
- Automated CI/CD pipeline with Docker, Kubernetes, and AWS, enabling 80% faster deployments and rollback handling.
- Built real-time communication using NATS and event-driven microservices,increasing system responsiveness for high-traffic scenarios.

KubeKart: Distributed E-commerce Backend System   GitHub
- **Tech Stack:** Spring Boot, Node.js, Kafka, Redis, PostgreSQL, MongoDB, Docker, Kubernetes
- Designed and developed KubeKart, a scalable e-commerce backend built on a microservices architecture, with cross-platform services in Spring Boot and Node.js.
- Utilized Apache Kafka for asynchronous communication and Redis for caching and session storage, ensuring low latency and real-time data sync.
- Employed PostgreSQL and MongoDB for relational and NoSQL data persistence, catering to varied data models.
- Containerized all microservices using Docker and deployed them via Kubernetes for orchestration and fault tolerance.

Certification and Courses

AWS Cloud Technical Essentials   Apr 2025
AWS, *Coursera*

Positions of Responsibility & Achievements

- Winner of Campus Beats Hackathon 6.0 by ZS Associates – secured 1st place nationwide.
- Organized PECFEST'23 & AICTA'23, managing logistics for 10,000+ attendees.
- Solved 300+ DSA problems on LeetCode, GFG, and CodeStudio.