

Amrit Raj

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Education

Indian Institute of Information Technology, Ranchi(IIITR):

Jharkhand, India

- **Bachelor of Technology (B.Tech) in Electronics and Communication Engineering** - GPA: 7.7

Dec. 2021 - Apr. 2025

- **Programming Coursework:** Algorithms & Data Structures, Database Systems, Computer Architecture

- **ECE Coursework:** Embedded Systems, Circuits, Logic Design, VLSI Design, Signal Processing

Projects

Pen & Pulse - Social Journalism and Blog Hosting Platform

Serverless API for streamlined blog management with secure user authentication and data validation.

[GitHub/PenPulse-\(Social-Journalism-and-Blog-Hosting-Platform\)](#)

[Live Application](#)

- **Serverless API Architecture:** Developed a serverless Blog API using *Cloudflare Workers* and *Prisma* with the Accelerate Extension, ensuring scalability and optimized database queries.
- **Enhanced Security:** Integrated JWT-based authentication to protect API endpoints, strengthening user data privacy.
- **Data Validation:** Leveraged *Zod* for rigorous request validation, achieving a 20% reduction in invalid requests by ensuring data consistency.
- **Efficient Code Management:** Utilized a monorepo structure with shared types via a common app, improving data handling across services and enhancing project maintainability.

An Interactive Kanban Board Application

Facilitates mobile payments, money transfers, and online bill transactions

[GitHub/An-Interactive-Kanban-Board-Application](#)

[Live Application](#)

- **Dynamic Grouping and Sorting:** Implemented flexible data grouping options (by status, user, or priority) and sorting mechanisms (by priority or title) to provide an adaptable user experience.
- **Responsive UI Development:** Designed a highly responsive interface using React and SCSS, significantly enhancing user interaction and accessibility.
- **Efficient API Integration:** Utilized the Quicksell API for seamless data integration, enabling real-time ticket management and data handling.

Ongoing Project

Automation and Workflow Integration Tool

Automates repetitive tasks by linking apps and services seamlessly

[GitHub/Automation-and-Workflow-Integration-Tool](#)

- **Efficient Frontend Development:** Developed a frontend with *Vue.js*, increasing task automation efficiency by 50%.
- **Streamlined Backend Processes:** Built a backend with *Flask* to handle API requests effectively, cutting task completion time by half.
- **Scalable Integration through Webhooks:** Enhanced app communication via webhooks, preparing the system for future integrations.

Stock Trading Platform

Real-time trading of stocks and assets with portfolio management tools

[GitHub/Stock-Trading-Platform](#)

- **Interactive UI Development:** Built an *Angular-based* user interface, enhancing interactivity and boosting user retention.
- **OAuth 2.0 Security Integration:** Implemented OAuth 2.0 for secure user authentication, ensuring full compliance with industry standards.
- **Real-Time Data Handling:** Used WebSockets for real-time stock data, achieving 99% accuracy in portfolio tracking.

→ **To learn more about some of my personal projects, please visit:** github.com/amritraj

Skills

- **Software Engineering:** Designed and implemented production services, full-stack applications, and tools, demonstrating initiative in new systems and improvements to large-scale systems.
- **Languages & Frameworks:** C++, Python, JavaScript, TypeScript, HTML, CSS, Tailwind CSS, MATLAB, Arduino.
- **Databases:** PostgreSQL, MongoDB (NoSQL).
- **DevOps & Cloud:** Docker, Kubernetes, CI/CD, AWS (EC2, S3, EKS), Prometheus, Grafana, NewRelic.
- **Backend:** Node.js, Express.js, Async programming, Serverless, WebSockets, Kafka, Redis, Middleware, ORMs.
- **Frontend:** React, Next.js, SPA, PWA, State Management (Redux, MobX), Responsive Design, UI Libraries (Material-UI, Bootstrap).
- **API Development:** REST, GraphQL, Authentication (JWT, OAuth 2.0), API Security.
- **Version Control:** Git, GitHub.
- **Soft Skills:** Cross-functional collaboration, agile adaptability, efficient time management, analytical problem-solving, and articulate technical communication.