

Kshitiz Raj

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SUMMARY

Analytical software engineer specializing in **scalable automation, backend systems, and event-driven architectures**. Proven track record in financial technology, workflow automation, and **rapidly deploying ML/AI capabilities**. Strengths: fast problem-solving, clean code, shipping innovative features.

EXPERIENCE

Barclays Bank PLC July 2024 – Current
Software Engineer-BA4 Pune, MH

- Built and improved **interactive dashboards** using complex **SQL** and **GraphQL** queries for faster, clearer data insights.
- Redesigned **PPT/Excel exports**, cutting server load and boosting response times by 40%.
- Added advanced **search filters** and visuals, enhancing accessibility and user experience.
- Resolved critical **production defects** and streamlined deployments through a robust **CI/CD GitLab-Kubernetes** pipeline, enhancing system stability.


Technical Graduate Developer-BA3 July 2024 – Feb-2025
Pune, MH

- Built a predictive ML model (96% accuracy, 91% precision) using **XGBoost** and **LightGBM** to forecast projects health (Red/Amber/Green), reducing false alerts.
- Reduced model training time by 63% through optimized pipelines, parallel processing, and **TF-IDF** based NLP risk extraction from project manager comments.
- Designed a scalable microservices architecture with **WebSocket** based pub/sub for real-time updates on interactive dashboards.

Summer Intern-BA3 June 2023 – Aug-2023
Pune, MH

- Developed Python-based automation tools for server-side management, saving 5 hours of manual work per week.
- Built real-time monitoring dashboards on the **ElasticSearch (ELK)** platform and implemented automated alerts using **ElasticSearch Watchers** for critical system events.

PROJECTS

 [kshitiz-raj](https://github.com/kshitiz-raj)

WorkSync | *TurboRepo, Express, Kafka, PostgreSQL, Prisma, Supabase, Next.js, ShadCN* Oct-2025

- Engineered a **modular, event-driven automation platform** allowing users to define custom workflows triggered by real-time events.
- Implemented complex automation actions such as **Slack messages, email alerts, and Ai-agent for Slack**, driven by dynamic user-defined inputs.
- Built a **Kafka-based event pipeline** to enable scalable, resilient task orchestration across distributed services.
- Designed a **PostgreSQL + Prisma backend** with Supabase Auth for secure, multi-tenant workflow isolation and access control.
- Developed a responsive frontend with **Next.js and ShadCN UI**, focusing on accessibility and seamless UX.

Tradosphere | *Next.js, TypeScript, WebSockets, PostgreSQL, Express, Redis, Docker, Docker Compose* April 2025

- Designed **API server architecture** to isolate user interactions from the **trading engine core**.
- Utilized **Redis pub/sub** and **queue model** for data transfer to the trading engine with **FIFO ordering**.
- Containerized with **Docker Compose**, orchestrating **TimescaleDB (PostgreSQL)** and **Redis**.
- Implemented real-time **WebSocket updates** for market data and interactive trading charts.
- Developed a **market maker bot** to simulate realistic market volatility and ensure liquidity.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C++
Backend: Node.js, Express.js, REST APIs, WebSockets, gRPC, Kafka
Frontend: React.js, Next.js, Tailwind CSS, HTML/CSS, Recoil.js
Databases: PostgreSQL, Redis, SQL Server, MongoDB, Prisma ORM, Supabase
Cloud/DevOps: Docker, AWS (EC2, S3), Vercel, Cloudflare, Git
Data Science: XGBoost, LightGBM, RandomForest, RNN, NLP, TensorFlow, Pandas
Other Skills: OAuth 2.0, JWT, WebRTC, Real-time Systems, CI/CD