Rajat Goel

LEAD SOFTWARE ENGINEER **DUBAI, UAE | UTC +04:00**

✉ grajat90@gmail.com   ◈ rajatgoel.xyz (portfolio)   in Rajat Goel

Full-stack engineer for **5.5y** specifically working in **DeFi, TradFi**, & high-performance **trading infra**. ex-**Opyn** - built **smart contract integrations, indexers, liquidation/risk hooks**, & full trading UIs. Founded **Optionlogy**- ultra-low-latency **options analytics & auto-trading SaaS**, scaled to thousands. I'm exceptionally good at building for speed, precision & elegant UX.

KEY ACHIEVEMENTS

- Launched **Opyn markets testnet** over **arbitrum sepolia**, building custom **indexers, smart contract interactions, multicall flows, SPAN margin calculations** and APIs that powered **>5000** testnet traders.
- Built high-throughput blockchain **indexer processing 45K+ daily events** with millisecond API latency.
- Created options analytics tool **(Greeks, payoff, BSM simulation)** used by **60K+ traders** on Optionlogy.
- Engineered low-latency **distributed algo trading engine** handling **400+ strategies per node**.
- Cut strategy execution **latency by 200%** via optimized **Kafka**, Redis, and in-memory pipelines.
- Built **tick-by-tick data indexing** pipeline, **aggregating & streaming >100,000 ticks/min** in real time.
- Delivered rapid, modular releases in **<1 week cycles without downtime**.

TECHNICAL SKILLS

- ***Programming Languages:*** TypeScript (5.5y), JavaScript (6y), Python (6y), Go (3y), Java (1y), Solidity (Beginner, 1y)
- ***Fullstack Frameworks & Libraries:*** Next.js (5y), React (6y), Node.js (5y), echo (3y), gin (3y), FastAPI (4y), Prisma (2y), tRPC (2y), TradingView Advanced Charts (3.5y), react-charts (3.5y), shadcn (2y), Tailwind CSS (3y), LangChain (1y), OpenAI SDK (1y), Apache Flink (3y), Kafka (3y)
- ***Web3 & Blockchain:*** Wagmi (1y), viem (1y), ethers.js (1y), RainbowKit (1y), WalletConnect (1y), OpenZeppelin (6mo), Foundry (1y), Hardhat (1y), Ponder (1y)
- ***Data & Storage:*** PostgreSQL (5y), Supabase (3y), MongoDB (5y), DynamoDB (4y), Redis (5y), Elasticsearch (1y), Amazon S3 (5y)
- ***DevOps & Infrastructure:*** AWS (5y), GCP (5y), Kubernetes (2y), Docker (4y), TurboRepo (1y), pm2 (5y)

EXPERIENCE

Lead Full-Stack Engineer • Opyn Markets (acq by Coinbase) 📅 Nov. 2024 – July 2025

Opyn pioneered the Power Perp (Squeeth) — a capital-efficient, on-chain perpetual options primitive without order books.

- Created **end-to-end trading flows**, integrating **arbitrum smart contracts** via **indexers, alchemy SDKs, and direct RPC calls**.
- Implemented contract **read, write & simulate logic** for trade execution, **transaction builder, position management, Uniswap calls, collateral and LP adjustments** and more with **viem/wagmi in NextJS** to enable seamless trading experiences for **>5000 users**.
- Designed **real-time on-chain data indexer** for **45K+ trade events**, pricing, liquidity, and risk parameters, in **ponder**, ensuring **<200ms UI response** for active DeFi traders.
- Engineered advanced off-chain calculations for **SPAN margin, liquidations, execution price, price impact, portfolio health, expected payoff, expected liquidations** & more for a complete view of your existing portfolio as well as any new potential trade
- Collaborated with smart contract engineers to design user interaction patterns **minimizing gas costs and failed transactions** through batched **multicalls**, transaction **simulations**, and advanced **validations based on liquidity and risk.**
- Developed dashboards to visualize **payoff & risk metrics** for on-chain positions, leveraging **advanced options knowledge.**
- Worked closely with protocol researchers to translate **DeFi economic mechanisms** into clear, actionable user experiences.

CTO & Co-Founder • Optionlogy
Nov. 2021 – Dec. 2024

Optionlogy was a Fintech product providing automated trading and market analysis in the futures & options segment to **60K+ traders**. As the CTO, I:

- Built a **multi-leg options analytics** suite with payoff curves, **greeks, implied volatility, deltas**, breakevens, and probability of profit, powered by a **custom Black–Scholes variant** combining implied volatilities for more realistic pricing.
- Designed **real-time data pipelines** for market feeds, catering to **>1500 ticks per second** and analytics using **WebSockets, Kafka, TimescaleDB, Redis, Python, Go, and Celery**, delivering **millisecond-level updates** to traders.
- Engineered a **distributed algo trading system** in Go using a **master-slave architecture**, managing load, job scheduling, and availability of strategy processor nodes, enabling parallel execution of **400+ long running strategies** per node across thousands of trading strategies.
- Developed a clean, intuitive & bug free user interface with streaming analytics using **NextJS, ReactJS, WS, Figma**
- Worked with **databases & caching layers such as redis and elasticsearch** for fast & scalable trading & analysis
- Managed a **tech team of 5 people** providing them with **architectural design**, technical guidance and PR reviews

Chief Technology Officer • GreeX
Feb. 2024 – July. 2024

Led by ex-Binance folks, GreeX was an early stage Crypto CEX, aimed at making crypto options easier and accessible

- Built **core exchange infra**: ultra-low-latency C++ **matching engine** with sub **1ms order matching** (Liquibooks) and **risk & liquidation systems**, with optimized API design, caching, and performance tuning.
- Engineered a **high-throughput Kafka data bus** for market data and order flow.
- **Managed a 3-person team**, steering architecture, reviewing PRs, and driving **delivery of critical systems**.
- Designed and shipped a **gamified Telegram mini-app** for options trading, from UX to **wallet integration**.

Principal Software Engineer • Madverse
Feb. 2024 – June. 2024

- Interacted with CTO and leadership to **discuss product plans** and provided timelines, suggestions & blockers
- Implemented features such as AI Cover Art using **NextJs, Prisma, OpenAi & Stability SDXL APIs, tRPC and S3**
- Developed new internal flows for **payment processing** for multi-country users using **Stripe + Razorpay**
- Fixed **UX flows and bugs** throughout the platform, reducing customer churn significantly

Data Associate • Innovaccer
Feb. 2022 – Nov. 2022

- Developed data and **ETL** pipelines for mission critical analytics using **SQL, ElasticSearch, python & Azkaban**
- Worked with big data and created statistics and dashboards to find insights & metrics using **PowerBI and python**
- Resolved **product level issues** and integrated features, reducing the time taken in getting multiple teams involved

EDUCATION

Bachelor of Technology - Computer Science

Jaypee Institute of Information Technology
2022