

Samaksh Gulati

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EXPERIENCE

Shell

Software Engineer

Bangalore, India

July 2023 – Present

- Engineered fault-isolated trade-processing workflows using **Python, Kafka and SQL Server**, preventing individual failures from blocking downstream systems and reliably supporting **10,000+ trades daily**.
- Standardized distributed observability across **30+ repositories** using OpenTelemetry, trace propagation and correlation IDs, accelerating cross-service diagnosis and reducing issue identification and resolution **from 1–2 hours to under 30 minutes**.
- Expanded automated regression coverage across 30+ repositories and led security remediation, improving release velocity and deployment confidence; **cut development and testing time by approximately 50%, doubled release cadence from monthly to biweekly**, and closed **100+ critical/high-severity findings across 10+ repositories**.
- Delivered **React/TypeScript trade-entry validation and data-quality improvements**, reducing booking failures and operational support load; halved production issues and support tickets **from approximately 20 to 10 per week**.

Futures First

Trading Market Analyst Intern

Gurugram, India

Jan. 2023 – June 2023

- Researched and backtested **100+ quantitative strategies** using Python, pandas, NumPy, statsmodels, scikit-learn and multi-year market data, converting statistical signals into decision-ready insights; advanced **10+ strategies into live use** across cotton, cocoa, sugar and Brent futures.
- Built real-time scanners, alerts and backtesting pipelines monitoring **5+ markets concurrently**, expanding shared opportunity coverage and reducing research time **from one week to one day**; supported approximately **\$40K in monthly live trading volume** with observed win rates of **60–80%** across evaluated periods.

PROJECTS

CIRT Lens | Security Incident Triage & Response Platform | [GitHub](#) | [Live](#)

- Architected a multi-tenant incident-triage platform using **FastAPI, React/TypeScript, PostgreSQL and Redis Streams**, enabling idempotent asynchronous processing across four telemetry sources; completed **100/100 ingestion jobs with zero errors at 557 events/second and 119 ms p95 latency**.
- Designed **deterministic detection and entity-time correlation engines** with explainable risk scoring, tenant-scoped RBAC and two-person approvals, enabling auditable incident investigation and response; processed **5,080 events in 28 ms while reducing candidate comparisons by over 99.9%** versus naive all-pairs processing.

AstraQuant Enterprise | AI Trading Operations Platform | [GitHub](#)

- Architected an event-driven trading platform using **Java/Spring Boot, Python/FastAPI, Kafka/Redpanda, PostgreSQL and Kubernetes**, preserving correctness across concurrent and retried market/order workflows through transactional outbox, idempotent consumers and deterministic replay across **11 backend service modules**.
- Built an autonomous research and paper-execution workflow with **20 deterministic strategy templates, walk-forward evaluation and credential-isolated Alpaca integration**, preventing the AI and strategy runtime from directly placing unreviewed or duplicate orders; validated behavior across **39 automated test files and repeatable Kubernetes recovery drills**.

TECHNICAL SKILLS

Programming Languages : Java, Python, TypeScript, SQL, JavaScript, C/C++

Backend & APIs : Spring Boot, FastAPI, REST APIs, Django, gRPC, GraphQL, WebSockets, Microservices

Distributed Systems & Data : Kafka/Redpanda, Redis Streams, Event-Driven Architecture, Asynchronous Processing, Idempotency, Transactional Outbox, PostgreSQL, SQL Server, Redis, MySQL, MongoDB

Cloud, DevOps & Observability : AWS, Docker, Kubernetes, Helm, Git, CI/CD, GitHub Actions, Azure DevOps, OpenTelemetry, Prometheus, Grafana

Frontend, Testing & Security : React, Pytest, JUnit, Playwright, Integration Testing, End-to-End Testing, OAuth 2.0/OIDC, JWT, RBAC

EDUCATION

Thapar Institute of Engineering & Technology

B.E. in Computer Science & Business Systems

Patiala, India

2019 – 2023