

# Gautam Mishra

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## Professional Summary:

- Software Engineer with 10+ years of experience owning and setting technical direction for large-scale backend systems, including distributed data platforms and high-throughput APIs.
- Specialized in defining and evolving data-intensive platforms across batch and streaming workloads, with responsibility for systems operating at billions of events per day.
- Strong background in backend architecture, data engineering, and production operations, with a focus on correctness, scalability, and long-term maintainability.
- Independent experience owning a production-grade investment analytics system, acting as the sole technical decision-maker across architecture, data pipelines, cost controls, and operational tradeoffs.

## Technical Summary:

**Programming:** Java (17/20, Core + EE), Python; JavaScript/TypeScript (working knowledge)

**Frameworks:** Spring Boot, Dropwizard, JUnit, Mockito; Flask (Python)

**Cloud:** IBM Cloud, AWS (EC2, Lambda, IAM, S3, SQS/SNS, ECS, EKS, EMR, AWS Batch, API Gateway, CloudFront)

**Data Lake:** Airflow, Hudi, Spark

**Data Streaming:** Kafka

**Databases:** PostgreSQL, MySQL, ClickHouse

**NoSQL:** Cassandra, Redis

**Monitoring:** Grafana, Datadog, OpenSearch, PagerDuty

**Front-End:** Angular (Internal Tooling)

**DevOps:** Jenkins, GitHub Actions, Docker, Kubernetes, Terraform, Helm

## Independent Technical Project:

**Principal Engineer | Independent Technical Project (ReturnAtlas) | [returnatlas.com](https://returnatlas.com) | Jul 2025 – Present**

- Defined and owned the end-to-end architecture for an investment analytics system, making explicit tradeoffs between correctness, cost efficiency, and long-term operational complexity.
- Established a batch-first, idempotent ingestion and API architecture, setting data contracts and operational guarantees to support reproducible backtesting and risk-adjusted analysis.
- Owned system design, data modeling, infrastructure-as-code, and operational guardrails, assuming scope typically distributed across multiple platform and application teams.

## Professional Experience:

**Senior Backend Engineer | KForce (Client: Fidelity Investments) | April 2024 - Present**

- Owned the design and rollout of firm-wide authorization data pipelines, setting correctness and reliability guarantees consumed by multiple downstream systems.
- Acted as the technical owner for a shared authorization platform, defining data and API contracts, coordinating multi-team rollouts, and serving as the escalation point for integration issues.
- Built and operated highly available REST APIs using Spring Boot on AWS EKS, aligned with Fidelity's cloud architecture, security and compliance standards.
- Delivered the team's first internal UI tool for firm and product data ingestion, eliminating recurring weekly manual uploads and reducing operational overhead for the business.
- Used GitHub Copilot selectively to scaffold Angular components and forms, accelerating UI delivery while retaining full ownership of backend APIs, validation logic, data integrity, and security controls.

- Raised baseline code quality and system reliability by establishing shared engineering standards and driving adoption across multiple services.

#### **Senior Backend Developer | IBM (The Weather Company) | Aug 2023 – Mar 2024**

- Designed and operated backend systems ingesting multi-terabyte datasets daily and distributing weather and lightning data products with strict latency and availability requirements.
- Designed and validated multi-region ingestion architectures using proofs of concept and quantitative analysis to guide resilience, performance, and cost tradeoffs.
- Migrated REST APIs from Dropwizard to Spring Boot and modernized CI/CD pipelines, improving developer velocity and production readiness.
- Migrated CI/CD pipelines from Jenkins to GitHub Actions and integrated automated security scanning, reducing build times by ~50% and lowering vulnerability exposure.

#### **Senior Software Engineer | Klaviyo | Jun 2021 – Jul 2023**

- Designed and built large-scale stream processing systems powering customer engagement workflows, processing over 5 billion events per day.
- Contributed to the design, implementation, and optimization of Klaviyo's first data lake built on AWS S3 and Apache Hudi, including ingestion pipelines, data layout decisions, and operational optimizations.
- Designed and implemented a materialized views framework using PySpark, enabling teams to efficiently query large datasets while isolating compute from ingestion workloads.
- Built and operated PySpark job orchestration using Apache Airflow, improving reliability and observability of batch data pipelines.
- Designed and implemented a high-throughput ticketing system generating thousands of unique identifiers per second, supporting event ingestion at scales exceeding 5 billion events per day.
- Created a data repair and replay framework within the data lake and ClickHouse ecosystem, enabling safe correction and recovery for billions of daily events.
- Provided technical leadership through design reviews and architectural guidance, influencing system design decisions and improving the robustness of backend platforms.

#### **Software Engineer | IBM | Feb 2017 – Jun 2021**

- Led the pivotal migration of TWC's radar and weather data products from on-premise infrastructure to IBM Cloud, acting as a workstream owner for key components.
- Designed and implemented scalable event-driven architectures using AWS SQS, SNS, and Lambda, forming the foundation for modernized data pipelines.
- Built distributed, low-latency streaming systems to modernize legacy applications while maintaining production continuity.
- Developed Spring Boot microservices on Kubernetes to ingest, process, and distribute weather data across Kafka and cloud object storage.
- Built auto-scalable ingestion systems processing terabytes of data daily, significantly improving cost efficiency and throughput.
- Championed infrastructure-as-code and observability practices (Terraform, Helm, Datadog), improving deployment reliability and operational visibility.

#### **Java Developer | Reliance Tech Services | Sep 2013 – Nov 2014**

- Implemented secure payment authentication flows, including 3D Secure, ensuring compliance with industry and regulatory standards.
- Built large-scale SMS routing and load-balancing services, supporting high-throughput, reliable message delivery for consumer-facing systems.

**Education:**

Master's in Computer Science - Illinois Institute of Technology (2015 - 2016)

Bachelor of Engineering in Computer Engineering - University of Mumbai (2010 - 2013)

Diploma in Computer Technology - Thakur Polytechnic (2007 - 2010)