

KARANSINGH BANGA

Senior Data Platform Engineer

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SUMMARY

Senior Data Platform Engineer with 10+ years of experience building, scaling, and securing data infrastructure for fintech and adtech companies. Currently serve as Snowflake accountadmin and lead platform engineer for a 50TB analytics platform at iCapital, owning infrastructure-as-code, security posture, ingestion, orchestration, and developer experience for 100+ pipelines and 100+ consumers. Manage a distributed team across NYC and Lisbon. Track record of turning solo-owned systems into team-owned, reviewable platforms — most recently leading a 6-month Snowflake-to-Terraform migration and a multi-pillar SOC 2 readiness effort.

EXPERIENCE

iCapital (formerly Simon Markets, acquired Aug 2022)

Feb 2022 – Present

Assistant Vice President, Data Platform Engineering

New York, NY

Previously Senior Data Engineer at Simon Markets (Structured Investments + Annuities Marketplace)

- **Platform Ownership** — Serve as Snowflake accountadmin and technical owner of a 50TB data platform powering 100+ production pipelines and 100+ consumers (70 human users, 30 services) across Marketing, Operations, HR, Engineering, BI, and CRM teams. Manage 2 mid-level engineers across NYC and Lisbon.
- **Infrastructure-as-Code Migration** — Led 6-month migration of entire Snowflake footprint (356 objects across 7 databases, 20+ schemas, 3 production accounts) to Terraform, eliminating bus-factor risk and enabling 8+ engineers to self-serve via PR workflow.
- **Security Posture Transformation** — Led multi-pillar security overhaul supporting SOC 2 readiness: migrated 40+ service accounts to key-pair auth, integrated Britive for just-in-time access, deprovisioned 60% of inactive Snowflake users, deployed 37 masking policies, and tagged 85% of sensitive data via Informatica. Authored data contracts, incident management, DR plan, and retention policies.
- **Internal Developer Platform** — Designed, architected, and solo-built the Data Control Hub — a React/FastAPI/Postgres web application unifying alerting, releases, and data-quality operations across the platform's tooling ecosystem; serves as foundation for team-owned AI-assisted tooling.
- **Cross-System Decryption Integration** — Delivered first-of-its-kind decryption integration orchestrating Snowflake, Tableau, Okta, Britive, and an internal cryptographic service via external integrations, PrivateLink, and UDFs; 15x faster than the prior Ruby-based tool. Aligned SecOps, Compliance, DevOps, and Engineering leadership; secured CTO sign-off.
- **Ingestion Platform** — Built out Airbyte OSS as the enterprise standard for data ingestion: 60+ production connections, ~600GB daily throughput, 98% reliability; reduced new source onboarding from 1-2 sprints to under a day.
- **Orchestration Re-platforming** — Technical co-lead on migration from a monolithic Airflow DAG (1,500 dbt models, 15 extractions, 7 uploads) to modular Prefect flows; co-designed architecture aligned with broader Snowflake medallion redesign.
- **Cost & Reliability** — Drove 8% month-over-month reduction in Snowflake spend via warehouse right-sizing and query optimization; maintain platform reliability at ~4 major incidents/year with 6-8hr MTTR for high-criticality issues.
- **Earlier at Simon Markets / iCapital** — Led post-acquisition data platform merger, championing Snowflake + Airflow stack to combined leadership; shipped iCapital's first Python service on EKS (FastAPI + MongoDB Asset Query Service); improved dbt runtime by 60% by migrating execution from Airflow workers to EKS.

Content IQ

Oct 2019 – Jan 2022

Data Software Engineer

New York, NY

- **Real-Time Ingestion at Scale** — Designed and built from scratch a real-time user-activity ingestion system on AWS (SQS + Lambda + PostgreSQL) sustaining ~40M requests/hour; architected a novel three-tier PostgreSQL rotation pattern that decoupled ingestion, aggregation, and processing — replacing reliance on third-party trackers.

- **Commerce IQ (Sole Engineer)** — Sole engineer designing and shipping Commerce IQ, an eCommerce extension of the core ad platform delivering dynamic, revenue-optimizing content to retail partners; launched to 6+ clients in production with GDPR and CCPA compliance baked in.
- **Campaign Automation** — Built API-driven campaign automation pipeline replacing a multi-hour manual spreadsheet workflow, reducing campaign launch time from a full day to a few hours (60% faster); extended to Slack for non-engineering stakeholder self-service.
- **Open Source — Apache POI** — Contributed a streaming workaround that bypasses POI's full-workbook memory load — uncompressing the .xlsx XML structure to extract, edit, and recompress single sheets in-place; deployed in CIQ production for Lambda-based spreadsheet processing.
- **Company-First SSO** — Designed and shipped CIQ's first single-sign-on implementation integrating Google and Okta; expanded coverage from 30% of internal tools at launch to 70% during tenure.
- **Production ML Pipeline** — Built and deployed a revenue-estimation pipeline on Amazon SageMaker (Random Forest Classifier) scoring real-time data to give campaign managers predictive revenue signal.

Sokrati Technologies

Apr 2015 – May 2017

Software Design Engineer

Pune, India

- **Account Audit Platform** — Built a Django + Celery application auditing prospective clients' Google Merchant Center, AdWords, and Facebook Ads accounts to deliver detailed performance analyses; supported a 30% increase in new customer onboarding.
- **Engagement Automation** — Built an integration aggregating client activity across 5+ external platforms (Google, OTRS, Freshdesk, Intercom, Pipedrive) into a credits-based engagement system, driving an 80% increase in daily client activity on Sokrati's platform.

Tata Consultancy Services

Nov 2013 – Mar 2015

Assistant System Engineer

Hyderabad, India

- **Application Integration & Support** — Delivered systems integration between American Express's Cobrand Credit Cards and Jet Airways using COBOL and IMS DB; supported feature requests and bug fixes across the Business Travel Account modules.

EDUCATION

Rutgers, The State University of New Jersey

Sept 2017 – May 2019

M.S. in Computer Science • GPA 3.78 / 4.0

Kalinga Institute of Industrial Technology

Aug 2009 – May 2013

B.Tech in Computer Science and Engineering • GPA 8.09 / 10

TECHNICAL SKILLS

Languages: Python (advanced), SQL, JavaScript / TypeScript, Bash, PL/pgSQL, Java

Data Platform: Snowflake, dbt, Airbyte, Prefect, Airflow, Informatica, Britive

Databases: PostgreSQL, MongoDB, MySQL, SQLite

Cloud & Infrastructure: AWS, EKS / Kubernetes, Terraform, Docker, Nginx, Jenkins, Redis, Kafka

Frameworks: FastAPI, React, Next.js, Django, SQLAlchemy

Practices: Infrastructure-as-Code, SOC 2 readiness, principle of least privilege, data contracts, incident management, DR planning, AI-assisted development workflows