Nicholas van Huyssteen

Backend Software Engineer · Java · Payments and Banking Integrations
Cape Town, South Africa · nicholas.vh30@gmail.com · Available immediately

SUMMARY

Backend engineer with around 4 years of professional experience across industrial IoT and financial services. Spent the last two at Electrum, a payments switch connecting South African banks and retailers, building and supporting Java services. Working knowledge of Kafka, MySQL, AWS and Kubernetes from that work. Personal projects include a Java web application, designed and partly built with AI coding tools, and a chess engine in C. Interested in lower-level systems work. Mathematics and Computer Science degree from Stellenbosch University.

TECHNICAL SKILLS

Languages	Java (primary), C#, C, SQL, Python (university)
Frameworks	Javalin and Spring Boot (personal projects)
Data	MySQL, Apache Kafka, Elasticsearch, SQLite, PostgreSQL (personal projects)
Infrastructure	AWS (RDS, EKS), Kubernetes, Docker, Argo CD, Linux command line
Build tools	Maven, Git
Domains	Payment switching, banking APIs, sensor telemetry
Practices	API integration, on-call production support, GitOps deployment

EDUCATION

BSc Mathematical Sciences (Computer Science stream)

Stellenbosch University

Algorithms, discrete mathematics, pure mathematics, abstract mathematics, applied mathematics, numerical methods, digital image processing, computer vision, concurrency, networking, web development, compiler design.

EXPERIENCE

Intermediate Software Engineer

2024 – 2026

Electrum Payments, Cape Town

Electrum runs the payments and value-added services switch used by major South African banks and retailers. My work was in the integration layer between merchants, banks and service providers, including PIN-based transaction flows.

- **Absa CashSend bridge:** Took a translator and authentication handler between Electrum's Money Transfer API and Absa's CashSend platform from design to production-ready, built to Absa's and Electrum's API specs. *Java, API integration, authentication.*
- **Shoprite airtime provider:** Integrated a new upstream airtime provider into the existing Shoprite airtime service and took it to production. *Java, API integration.*
- **Capitec production support:** Front-line on-call engineer for Capitec. Diagnosed and resolved incidents across Java services, Kafka data extracts, Istio routing, MySQL and RDS connectivity, and batch and SFTP flows, working with the bank's engineers and third parties. *Incident diagnosis, Kafka, MySQL, Kubernetes logs.*
- **Capitec platform migration:** Made assigned configuration changes to the payment, lottery, money transfer and airtime services during a multi-team migration from a legacy platform to Kubernetes. *Kubernetes, Istio, Argo CD.*
- **Old Mutual Bank environment:** Led the setup of a new customer environment on AWS and the deployment of the airtime and lottery services into it. The work was infrastructure and Kubernetes configuration, covering account setup, RDS, EKS and Argo CD deployments. *AWS, Kubernetes, Argo CD.*

Software Engineer

2022 – 2024

Divigraph, South Africa

Divigraph makes wireless vibration and temperature sensors for industrial machinery, feeding a predictive maintenance platform.

- Contributed to the software that ingests, stores and displays sensor telemetry, mainly in C# with SQLite for on-device and edge data. *C#, SQLite, time-series data.*

PROJECTS

Personal projects

2026

- **Insight (giveinsight.app):** A live web app for tracking tasks and time that works out how far estimates run over. Designed and partly built with AI coding tools, in Java 21 with Javalin, plain JDBC and PostgreSQL, with server-rendered HTML, plain CSS and a little JavaScript. Self-hosted on an Ubuntu server, with row-level security, automated tests and nightly backups. *Java, PostgreSQL, Maven, Linux.*
- **Multi-currency ledger:** An accounts and transactions ledger over a REST API, covering ZAR and stablecoins, with amounts stored as exact integers. In progress and not used in production. *Java, Spring Boot, MySQL, Flyway.*
- **Chess engine:** A chess engine written from scratch in C, built with make. In progress. *C.*