Kamogelo Ellen Kganakga

Email | GitHub | LinkedIn | Behance

SUMMARY

Software engineer with proven high-performance delivery: awarded Employee of the Year within 5 months and ranked Top 15 GitHub contributor in South Africa through consistent project output. Combines self-taught development foundations with formal backend training from ALX's intensive 12-month program (96.78% Backend GPA), strong algorithmic foundations demonstrated through completion of 100+ algorithm visualizations, and hands-on AWS experience (EKS, Lambda, Terraform) demonstrated across distributed systems projects. Skilled in C#, Java, Python, and C++ with a focus on peer collaboration, adaptable problem-solving, and delivering high-quality, reliable solutions. Currently expanding cloud architecture expertise through AWS certification preparation.

EDUCATION

African Leadership Xperience (ALX)   Johannesburg, South Africa
Software Engineering Certificate – Backend Specialization (Intensive 12-Month Program)   *Aug 2023 – Sept 2024*
- **Backend GPA: 96.78%** — Foundations GPA: 77.54%
- Curriculum: Distributed systems, cloud architecture, algorithms, data structures, systems programming

EXPERIENCE

Full Stack Programming Intern   Aug 2025 – Present
Eragateway   *Rivonia Sandton, South Africa*
- Awarded **Employee of the Year** within 5 months for mastering TypeScript/PHP/MySQL stack and delivering features that maintained sprint velocity during critical launch periods
- Built and maintained **6+ production web applications** using TypeScript, PHP, MySQL; translated user feedback into technical solutions improving UX and system reliability
- Conducted peer code reviews and pair programming in GitHub Projects sprints to ensure code quality and team collaboration

Software Developer & UI/UX Designer   May 2023 – July 2025
Fallible   *Remote*
- Built and maintained responsive client websites using React/Next.js; monitored performance and ensured high client satisfaction through consistent communication
- Designed iOS app systems in Figma following Apple HIG with 95% design-to-code fidelity

PROJECTS

OpenTelemetry DevOps Simulation | *AWS EKS, Terraform, GitHub Actions, Prometheus, Grafana* [GitHub]   Jul 2025
- Deployed microservices on AWS EKS using Terraform for infrastructure-as-code provisioning
- Built CI/CD pipeline with GitHub Actions for automated testing and deployment
- Configured Prometheus and Grafana for comprehensive system monitoring and observability

SaaS RBAC Prototype | *Bun, Elysia.js, PostgreSQL, React* [GitHub]   Dec 2025
- Developed a multi-tenant role-based access control platform for scalable user permission management
- Implemented backend using Bun runtime with Elysia.js framework for high-performance APIs
- Designed normalized PostgreSQL schema to ensure secure data isolation between tenants

Serverless Commerce API – AWS Hackathon | *AWS Lambda, C#/.NET, API Gateway, DynamoDB*   Jul 2025
- Built serverless e-commerce API using C# and .NET deployed via AWS Lambda functions
- Integrated DynamoDB for scalable, low-latency product and order data storage
- Configured API Gateway to handle HTTP routing, authentication, and request throttling

InventoryLens: AI Model Deployment | *Python, FastAPI, HuggingFace DETR, Docker* [GitHub]   Jul 2025
- Containerized Python FastAPI backend to serve HuggingFace DETR object detection model
- Developed REST endpoints for image processing, model inference, and result retrieval
- Optimized Docker image for reduced size and improved deployment performance

Environmental Data Management API | *Java, Spring Boot, JPA, PostgreSQL, OpenAPI* [GitHub]   Jun 2025
- Engineered RESTful API with Java Spring Boot to manage environmental sensor data
- Implemented normalized database schema using Spring Data JPA with PostgreSQL
- Documented API endpoints comprehensively using OpenAPI/Swagger for client integration

Algorithm Visualization Suite | *JavaScript, p5.js, DSA* [GitHub]   Jan 2025
- Engineered 100+ algorithm visualizations including pathfinding, sorting, fractals, and computational geometry algorithms
- Implemented genetic algorithms for optimization problems and Markov chains for procedural generation
- Created interactive demos of advanced mathematical concepts including Fourier transforms and chaotic systems

Project Management API | *Python, FastAPI, MongoDB, JWT* [GitHub]   Aug 2024
- Designed asynchronous project management API using Python FastAPI framework
- Implemented JWT-based authentication and role-based access control for user security
- Utilized MongoDB for flexible document storage with modular, scalable routing architecture

Skills

Languages: Java, Python, C++, C#, TypeScript, JavaScript
Frameworks: Spring Boot, FastAPI, .NET, React, Next.js, Elysia.js
Cloud: AWS (EKS, Lambda, DynamoDB, API Gateway), Docker, Kubernetes, Terraform
DevOps: GitHub Actions, Version Control (Git)
Databases: PostgreSQL, MongoDB, DynamoDB, MySQL
Tools: Linux, Git, HuggingFace, Figma
Concepts: Object-Oriented Programming, API Design & Integration, System Documentation

Achievements & Certifications

GitHub: Top #44 GitHub Contributor – South Africa (2025) [Link]
C# Certification: Object-Oriented Programming & .NET Fundamentals (2025) [Link]
Python Certification: Data Processing & Algorithm Implementation (2023) [Link]
System Design: Software Architecture, Microservices on AWS, Scaling Strategies (2025) [Link]

Hobbies

Math, Dancing , Reading , Hiking