

Gabriel Effangha

Lagos, Nigeria

, gabrielnoah129@gmail.com

+2349053171386 | github.com/Geff115 | <https://www.linkedin.com/in/gabriel-effangha-567828354/>

PROFESSIONAL SUMMARY

Software & ML Engineer with strong experience in full-stack development and applied machine learning. Certified in Data Science for Precision Medicine from the Department of Genetics at Stanford University, with practical knowledge in bioinformatics, cloud computing, genomics, medical imaging, and real-world healthcare data. Proficient in Python, TypeScript, and R, with hands-on experience building scalable, ML-powered platforms and AI-driven APIs.

TECHNICAL EXPERIENCE

Stanford Data Ocean Projects (Bioinformatics, AI/ML)

Bioinformatics, Genomics, AI/ML, Imaging, Transcriptomics, Metabolomics, Cloud Infrastructure (AWS S3, Athena), Clinical and Wearable Health Data

- Queried and analyzed the 1000 Genomes Project using PyAthena and AWS S3.
- Visualized transcriptomic and epigenetic data using heatmaps, volcano plots, and PCA in Python and R.
- Built CNN-based image classification models using TensorFlow to classify medical images (e.g., pneumonia detection).
- Applied dimensionality reduction techniques (PCA, UMAP, t-SNE) on omics data.

YouTubeIntel (Backend)

Flask, Celery, Redis, Gemini, Supabase (PostgreSQL), Resend, Korahq(payment integration), Docker, Cloudinary
[GitHub Repository](#) – Production-ready SaaS platform

- Built a full-scale, cloud-deployed SaaS platform for YouTube channel discovery and analytics, capable of handling 5–15 million channels.
- Developed a robust credit-based monetization system with tiered pricing and Redis-backed rate limiting.
- Designed a secure authentication system with JWT, Google OAuth, device/session tracking, and HTML email flows (Resend).
- Implemented async batch processing using Celery + UPSTASH Redis for high-performance task execution.
- Built intelligent discovery algorithms with 6+ strategies (collaborations, SocialBlade, content similarity).
- Built an AI-powered channel analytics API to give deeper insights into videos and channel metadata.
- Implemented WebSockets for real-time notification updates.
- Integrated an eventlet background worker with gunicorn to handle asynchronous operations for non-blocking threads, leveraging eventlet.monkey_patch().
- Integrated Korapay for regionalized payments and Resend for high-deliverability emails.
- Architected for scalability using Supabase PostgreSQL, RESTful APIs, and future-ready frontend hooks (Next.js 14 planned).
- The platform includes API usage tracking, growth analytics, job monitoring, and export options (CSV/JSON).

YouTubeIntel (Frontend)

Next.js, TypeScript, Tailwind CSS, Eslint

[Live App](#) | [GitHub Repository](#)

- Built a sophisticated UI that consumes the YouTubeIntel backend APIs, with moderate buttons and touches.
- Enabled real-time validation of user inputs with descriptive error messages during sign-up and sign-in.
- Implemented a “Continue with Google” functionality, giving users the flexibility to sign up or sign in with Google. Users can also sign up and sign in using the traditional way.
- Built a complete dashboard with detailed navigation and profile structuring. Users can discover channels, purchase credits, and so much more. Implemented advanced AI channel prediction growth analytics, batch channel discoveries, and real-time notifications of channel discoveries.

Image classifier: “Bird or Forest”

PyTorch, FastAI, ResNet18, Jupyter, DuckDuckGo Search

[GitHub Repository](#)

- Collected and curated image datasets of birds and forests using DuckDuckGo Search API.
- Preprocessed images to 192x192 resolution, handled corrupted files, and ensured clean data ingestion.
- Trained a ResNet18 model using FastAI with 0% validation error and no signs of overfitting.
- Successfully deployed model using .pth format for Hugging Face compatibility.

Brand Identity API

FastAPI, GPT-4o, Playwright, Redis, Docker, ColorThief

[GitHub Repository](#)

- Built an API to extract brand elements (logos, palettes) from websites using Playwright and ColorThief.
- Integrated GPT-4o for intelligent tagline and identity generation.
- Added Redis caching and rate limiting for scalability and performance optimization.
- Tested extensively on dynamic, JS-heavy sites like Airbnb.com.

Monty Bytecode Interpreter

C, Data Structures (Stacks, Queues), Linked Lists

[GitHub Repository](#)

- Implemented an interpreter supporting stack/queue operations using LIFO/FIFO logic.
- Implemented a Linked List data structure to push and pop elements from the stack.
- Designed a centralized header file for clean function referencing and a modular codebase.

KYC Form App

Next.js, JavaScript, CSS

[Live App](#) | [GitHub Repository](#)

- Created a multi-step form navigation with smooth transitions between form steps with state persistence.

- Enabled real-time validation of user inputs with descriptive error messages.
- Implemented file uploads functionality that allows users to upload their documents (e.g., ID document, proof of address).
- Added a review-before-submit experience.

User Authentication Service

Python, Flask, SQLAlchemy, bcrypt

[GitHub Repository](#)

- Designed a modular authentication system decoupled from app logic.
- Secured user credentials using salted password hashing with bcrypt.

AirBnB Clone

Python, Flask, SQLAlchemy, Vanilla JS, HTML/CSS

[GitHub Repository](#)

- Built backend logic for serialization/deserialization of model instances.
- Implemented CLI-based console for object management and CRUD operations.

EDUCATION

Sep 2022 –

Current

Bachelor of Science in Computer Science

UNIVERSITY OF LAGOS | LAGOS, NG

- Major: Computer Science, Minor: Physics

Apr 2025 -

Jun 2025

Stanford University — Department of Genetics

Certificate in Data Science for Precision Medicine (2025)

- Topics covered: Bioinformatics, Genomics, Transcriptomics, Epigenetics, Proteomics, AI/ML, Medical Imaging, Clinical & Wearable Data, Cloud Computing (AWS Athena), Exposome Analysis

Nov 2023 -

Feb 2025

Software Engineering

ALX FOUNDATIONS – ALX AFRICA

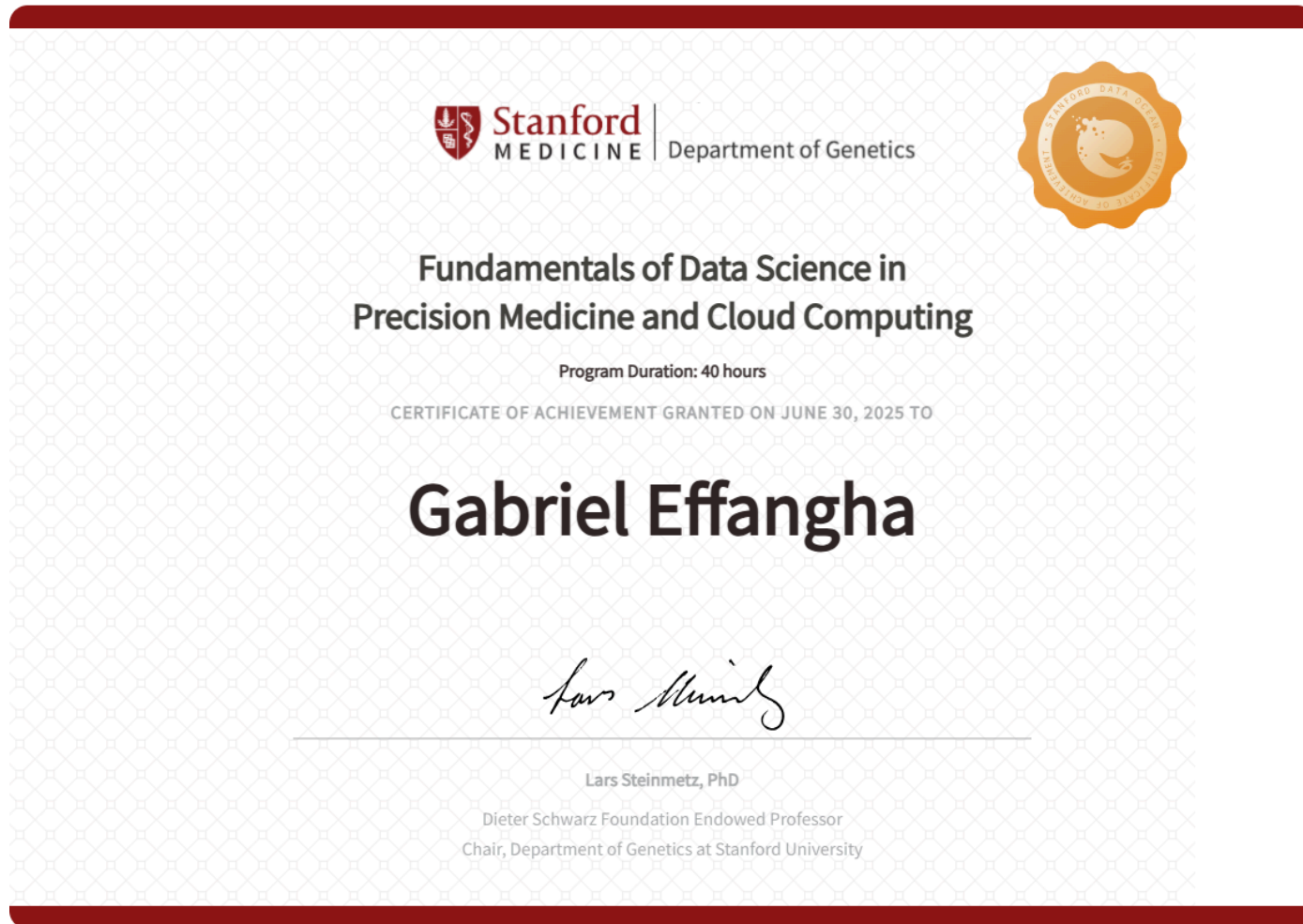
- Full-stack Software Engineering

SKILLS

- Programming Languages: Python, C, TypeScript, JavaScript, Pandas, R.
- Bioinformatics Tools: PyAthena, Bioconductor, R, Volcano Plots, Heatmaps, PCA, UMAP, DESeq2 (basic exposure).
- Frameworks: FastAPI, Django, Flask, Next.js, React.
- Tools: Git, Docker, Playwright, Selenium, ColorThief, Kubernetes, Supabase, Firebase.
- Databases: PostgreSQL, MongoDB, MySQL, Redis.
- Cloud/Healthcare: Amazon Athena, S3, Clinical Data Processing, EHR
- Other: CI/CD, Unit Testing, AGILE, REST API Design.

CERTIFICATIONS

- **Fundamentals of Data Science in Precision Medicine and Cloud Computing — Department of Genetics, Stanford University**



- **ALX Software Engineering – Full Stack Engineer, Specializing in Backend:**

CERTIFICATE OF COMPLETION

This is awarded to

Gabriel Effangha

For completing a 12 Month ALX Software Engineering
Programme with a specialization in **Back-end**.



FRED SWANIKER
Founder & CEO, AL Group



JULIEN BARBIER
Chief Product Officer, ALX



Date of Issue: 12th February 2025

Program completion date: 8th February 2025

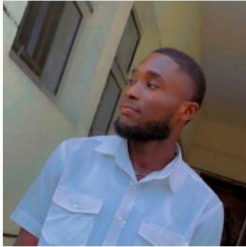
Scan the qr code or visit <https://intranet.alxswe.com/certificates/ESyTsJBC2p> to validate the certificate



ALX (KEN) Limited
The Mirage, Tower 1, 5th Floor, Chiromo Road
Westlands, Nairobi, Kenya
Email: se-support@alx.app
PIN: P051716230D

Student Transcript

Gabriel Effangha



Address: 2 Olaide awoye street , Ilasamaja Mushin , Lagos state ,
100263, Nigeria
Phone: +2349053171386
Student ID: 419727
Start Date: 11-20-2023
Grad Date: 01-18-2025
Status: ACTIVE
Termination Date: -
Withdrawal Date: -
Last Date of Attendance: -

Scores - SE Foundations **Validated**
85.12%

Sprint 1	
Month #0 (11/20/2023 to 01/09/2024)	116.9% ✓
Month #1 (01/10/2024 to 02/07/2024)	80.3% ✓
Month #2 (02/08/2024 to 03/02/2024)	21.62% ✓
Month #3 (03/03/2024 to 04/03/2024)	113.08% ✓
Month #4 (04/04/2024 to 05/06/2024)	69.74% ✓
Month #5 (05/07/2024 to 06/08/2024)	88.84% ✓
Month #6 (06/09/2024 to 07/09/2024)	88.4% ✓
Month #7 (07/10/2024 to 08/12/2024)	53.83% ✓
Month #8 (08/13/2024 to 09/27/2024)	114.03% ✓

Scores - Short Specializations **In progress**
125.65%

Sprint 1	
Month #0 (09/30/2024 to 10/25/2024)	142.52% ✓
Month #1 (10/26/2024 to 11/22/2024)	116.65% ✓
Month #2 (11/23/2024 to 01/17/2025)	96.63% 🍌

School Official Name Maarten van Middelburg Date 09/12/2024

School Official Signature

I DO HARD THINGS

