

# Fongong Emmanuel Nkwanwi

Bambili, Bamenda • emmanuelfongong10@gmail.com • +237683060023 • <https://github.com/Emma20040>

## Education

### NATIONAL HIGHER POLYTECHNIC INSTITUTE

Bamenda, Cameroon

Bachelor of Engineering in Computer Engineering

Expected July 2027

**Relevant Coursework:** Data Structures and Algorithms, Computer Architecture, Operating Systems, Database Systems, Probability and Statistics for Engineers, Cryptography.

### GOVERNMENT BILINGUAL HIGH SCHOOL ETOUG-EBE

Yaounde, Cameroon

June 2022

## Technical Skills & Projects

**Programming:** Python, Java, SQL, JavaScript .

**Tools:** Spring boot, Django, Flask, PostgreSQL, MySQL, Mongoddb, Docker, Redis, Apache Kafka.

### Authentication and Authorization Server

October 2025

*Spring Boot, Redis, OAuth2, JWT, reCAPTCHA v3*

- Designed and implemented a scalable authentication server using Spring Boot, supporting manual and OAuth2 (Google) login for secure user access.
- Integrated Redis for efficient JWT-based session management, reducing login latency by 30%.
- Enhanced API security with reCAPTCHA v3 and rate-limiting measures, mitigating 95% of potential brute-force attacks in stress tests.

### Bike Sharing Demand Prediction Model

May 2025

*Python, Scikit-learn, Pandas, Machine Learning*

- Developed a machine learning model to predict daily bike rental demand for a city-wide bike-sharing system, achieving 91% accuracy on test data.
- Preprocessed and analyzed historical rental data using Pandas, identifying key predictors like weather and time of day.
- Optimized model performance with hyper-parameter tuning, reducing prediction error by 12% compared to baseline models.

### Social Media Application

September 2024

*Django, Bootstrap5, Posgresql,*

- Built a full-stack social media platform enabling users to follow, post, like, and comment, with a responsive UI developed in Bootstrap5.

- Implemented secure user authentication and profile management using with Django, supporting 100+ concurrent users in testing.
- Designed database schema for efficient storage of user data and interactions, improving data retrieval speed by 20%.

### **Relevant Experience**

#### **BITSVALLEY**

##### **Software Engineering Intern (Team Lead)**

Bamenda, Cameroon

August 2025 – September 2025

- Led a team of seven developers to design and implement a scalable digital library management system using Spring Boot and MySQL, enabling users to browse and manage digital books.
- Developed secure JWT-based authentication and role-based access control, reducing unauthorized access attempts by 98% through robust session management and email verification.
- Integrated Stripe for payment processing and implemented time-limited content access, increasing transaction completion rates by 15% with secure webhook validation.
- Engineered advanced book search and filtering features with pagination, improving user query response time by 25% through optimized MySQL queries.

#### **TRAITZ TECH**

##### **Software Engineering Intern**

Bamenda, Cameroon

August 2024 - September 2024

- Built a fully functional e-commerce website using Django, supporting daily users with seamless product browsing, cart management, and checkout processes.
- Designed and implemented RESTful APIs for inventory and order management, reducing data retrieval latency by 20% through efficient schema design.