





Jean Baptiste SHUMBUSHO

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 Kigali, Rwanda

PROFILE

Senior Software Engineer with strong expertise in software architecture, system integration, and full-stack development across web, mobile, and desktop platforms. Experienced in designing scalable microservices architectures, deploying cloud-ready systems and applications in Linux-based environments, with hands-on experience in modern DevOps practices. Highly skilled in database design, optimization, and data engineering across SQL and NoSQL platforms, including ETL pipelines, data warehousing, and business intelligence analytics. Adept at leading scalable projects, mentoring engineering teams, and delivering solutions in Artificial Intelligence / Machine Learning (AI/ML), Blockchain, and Cybersecurity using modern programming languages and frameworks.

EXPERIENCE

Senior Software Engineer

 Oct 2022 - Present

ITEC International | Rwanda

Responsibilities:

- Lead software architecture, server setup, system integration, and DevOps initiatives, ensuring scalable, secure, and high-performance solutions
- Mentored engineering teams, defined technical standards, guided technology choices, and drove innovation across projects
- Database management and data pipelines, optimizing performance, ensuring security, designing schemas, and implementing backup and recovery strategies.
- Drove AI/ML and IoT initiatives, including model training, data warehousing, and big data handling.

Full-stack Developer,


 Sept 2020 - 2022

ITEC International | Rwanda

Responsibilities:

- Encompass the entire software development lifecycle for both web and mobile applications, including designing responsive and intuitive front-end interfaces, building secure and scalable back-end systems, managing databases, and ensuring smooth deployment and ongoing maintenance.
- Skilled in system integration, including third-party integrations, and in developing APIs to connect and extend existing systems.

IT Support

 Dec 2019 - May 2020

Southern Province

- Responsibilities:
- Daily on-air radio studio equipment troubleshooting and configure any new services
- editing speech-based audio and other related
- Hardware maintenance and troubleshooting
- Network configuration and troubleshooting in HUGUKA offices,

EDUCATION

Bachelor's Degree in Information Technology

 2025

RP Tumba College

- Bachelor's Degree from RWANDA POLYTECHNIC

Advanced Diploma in IT

 2021

Tumba College of Technology (TCT)

- Advanced Diploma

High School Diploma, Mathematics, Physics, Computer Science

 2017

Ecole de science NYAMAGABE

- Secondary education
- High school Diploma certificate (A2) in Mathematics, Physics and Computer Science, obtained from Ecole de science de NYAMAGABE.

SKILLS

Java

JavaScript

SQL DB

PHP

Python

ReactJS

Machine Learning

Blockchain

Linux

NOSQL (MongoDB, Cassandra, DynamoDB)

LANGUAGES

English

Fluent

French

Basic

Swahili

Basic

OTHER SKILLS & CERTIFICATIONS

Programming Languages:

Java, Python, PHP, JavaScript, TypeScript, SQL, CSS, Go, NestJS, C#, Kotlin,R, Shell scripting, Dart

Frameworks & Libraries:

FastAPI, Flask, Laravel, Django, Node.js, React, React Native, Flutter, ASP.NET Core, Spring Boot, Angular

DevOps & Cloud Tools:

Git & GitHub, Docker, Docker Compose, Docker Hub, Podman, Jenkins, Ansible, Terraform, Kubernetes, Nginx, AWS, CI/CD pipelines

Monitoring & Testing Tools

Prometheus, Grafana, Swagger/OpenAPI, Postman, Insomnia

Database Technologies:

MySQL, Oracle, PostgreSQL, MongoDB, Cassandra, JSON-based DBs, Firebase, Firestore

Machine Learning & AI:

Training, deploying, and optimizing models for Supervised learning (Linear Regression, Logistic Regression, K-Nearest Neighbors, Decision Trees, Random Forest, Gradient Boosting), Unsupervised learning (K-Means, PCA, Hierarchical Clustering), Deep Learning (CNN, RNN, LSTM, GRU), Time Series Forecasting (ARIMA, Prophet, LSTM-based models), and Natural Language Processing (Transformers, LLMs, embeddings). Skilled in Feature engineering, Hyperparameter tuning, Ensemble methods, and model evaluation.

Data Mining & Data Warehousing:

Expertise in designing and managing large-scale data warehouses using relational databases like MySQL, Oracle, or SQL Server, and implementing ETL processes for structured and unstructured data integration. Skilled in applying data mining techniques such as clustering, classification, and association rule mining to uncover patterns and insights, with practical experience using tools like Weka, RapidMiner, and Python libraries (Pandas, Scikit-learn). Proficient in dimensional modelling (star and snowflake schemas) and OLAP cube creation for advanced analytics, enabling efficient business intelligence reporting and decision-making.

Blockchain Technology:

Smart contracts, Solidity, DApps

Design & UI Tools:

Figma, Wireframing, Adobe Illustrator, Adobe Photoshop

IoT & Embedded Systems:

IoT database integration using MongoDB and JSON-based systems for real-time sensor data management, with practical knowledge of PCB design using tools like Proteus to simulate and create embedded hardware prototypes. Skilled in hardware troubleshooting and maintenance, as well as basic embedded programming using C/C++ or Micro Python for microcontrollers such as Arduino and ESP32

Systems & Networking:

Linux/Windows Server administration, Network & DNS configuration, Firewall management, TCP/IP, DHCP, VPN setup, Shell scripting, Server monitoring, User and permissions management.

TRAINING AND CERTIFICATES

- IT Essentials
- CCNAv7: Introduction to Networks
- CCNAv7: Switching, Routing, and Wireless Essentials
- CCNAv7: Enterprise Networking, Security, and Automation
- CCNA Cybersecurity Operations.