

Ludovic TEMGOUA ABANDA NDAMKONG

Software Developer

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 [Ludovic Temgoua Abanda](#)

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I am **Ludovic TEMGOUA ABANDA NDAMKONG**, a **software developer** with **6+ years** of experience building and maintaining **high-performance, scalable systems** using **Scala, Java, C++ and Go**, and **8+ years** overall in software development. My expertise lies in designing and optimizing **efficient microservices** and **event-driven architectures**, leveraging state-of-the-art **system design techniques** to ensure reliability and scalability.

I have a strong track record of **optimizing backend performance**, achieving **5x faster response times**, and modernizing outdated architectures to exceed previous performance benchmarks by **20%**. Additionally, I have experience in **AI system development, blockchain technology, and GPU-accelerated computing**, applying these skills to build cutting-edge, high-throughput solutions.

While my primary focus is on **system architecture & backend development**, I have also worked on **frontend projects**, though my expertise is deeper in backend technologies. Beyond coding, I enjoy **technical writing, mentoring students** in [Google Summer of Code \(2019 – Present\)](#), and spending quality time with family.

SKILLS

- Backend Development
- Microservice Development
- RESTful Web Services
- Database Design & Administration
- Performance Optimization & Load testing
- Scalability & Efficiency Enhancements
- Team Collaboration & Support
- Cross-functional Communication
- Agile Methodology
- Cloud Technologies
- System Architecture & Design

Technologies

- Scala, Java, C++, Python, Typescript, Rust, Go
- React.js, Next.js, Angular, RxJS, Redux, TailwindCSS
- PostgreSQL, MongoDB, Cassandra, Dynamo, Redis
- ZIO, CatsEffect, Doobie, FS2, Http4s
- Spring Boot, Quarkus, Micronaut
- Typesafe Stack (Akka actors, streams, cluster, http, persistence).
- Ethereum (Solidity, Web3.js, Hardhat, Truffle)
- Spark, Hadoop, PyTorch, TensorFlow, MLflow, Kubeflow
- TLA+, CUDA, OpenCL, MPI (Message Passing Interface), OpenMP
- Jira, Slack, Github, Argocd, AWS, Azure, Docker, Kafka, Kubernetes, Jenkins, Grafana Stack, Prometheus, DataDog

PROFESSIONAL EXPERIENCE

Project Support | [University of Luxembourg](#), Luxembourg | February 2025 – Present | Part-time

- I am currently part of the HPC team, responsible for writing and migrating **CUDA-based code** from **NVIDIA GPUs** to **AMD GPUs**. My role involves adapting low-level GPU kernels, ensuring performance portability, and validating correctness across architectures.

- I was part of a 3-person team contributing to [Turbo](#), a GPU-based constraint solver, where I focused on encoding set constraints into efficient Boolean formulations. My work involved **C++** implementation and **MiniZinc** integration to improve solver expressiveness and performance.
- Keywords: **Constraint Programming, Set Constraints, GPU-Accelerated Solvers, C++, MiniZinc, Parallel Computing, High-Performance Computing (HPC), GPU Programming, CUDA, HIP, ROCm, GPU Kernel Optimization, Code Migration, Profiling & Debugging**

System Architect | [HIIS](#) (Software Company), Cameroon | January 2024 – Present | Part-time

- Leading the design and implementation of an **AI-powered search system** for products, enabling users to receive **real-time search results** based on the **highest quality** and **best prices**.
- Integrated **multi-modal search capabilities**, allowing users to search for products using **text, voice**, and **image recognition**.
- Utilized **microservices** and **event-driven architecture** to ensure **scalability, reliability**, and **real-time data processing** across the system.
- Collaborated with cross-functional teams to design **flexible** and **scalable backends** that supported high-volume requests and efficient data retrieval.
- Keywords: **Java, Scala, Python, Microservices, Event-Driven Architecture, AI Search, Machine Learning, Image Recognition, Text & Vector Search, Kafka, Docker, Kubernetes, AWS, PostgreSQL, Elasticsearch, TensorFlow, API Design, RESTful Services, Jira, CI/CD**

Senior Scala Developer | [White Hat Gaming](#) (iGaming Platform), UK | December 2022 – September 2023 | Full-time

- Developed and optimized Scala-based microservices for a high-performance iGaming platform.
- Enhanced data-intensive backend services, improving scalability and system efficiency.
- Enhanced a user game history system, enabling the Backoffice team to efficiently debug gameplay issues related to wins and billing.
- Integrated multiple third-party gaming APIs (Evolution, 1X2 Gaming, Pariplay) to expand platform features and enhance player experience.
- Worked with distributed systems, microservices, and cloud-native architectures to ensure platform reliability.
- Keywords: **Scala, Java, Angular, CatsEffect, Microservices, REST API, Postgres, ZIO, Docker, Kubernetes, Kafka, AWS, Datadog, Jira**

Senior Backend Developer | Bright Face Ads, Cote D'Ivoire | September 2021 - November 2022 | Full-time

- Developed the **backend infrastructure** for a **real-time bidding system**, powering video billboard advertising across **4+ African countries**.
- Designed and optimized a **high-performance RTB (Real-Time Bidding)** system using **Scala, Python**, and **Kafka**, ensuring **low-latency ad auctions** based on the **OpenRTB protocol**.
- Integrated the **social media marketing backend** with external advertising platforms, including **Facebook Ads, Google Ads, and Eskimi**, expanding reach and automation.
- Led **knowledge-sharing sessions** within the team, improving collaboration and reducing knowledge gaps.
- Worked closely with the **bidding team** to enhance **scalability, fault tolerance**, and **real-time processing** within the ad-serving pipeline.
- Keywords: **Scala, Python, Nodejs, Catseffect, Microservices, REST API, Event sourcing, ZIO, Docker, Kubernetes, Kafka, Elastic stack, AWS, Jira**

Scala Developer | [AOSSIE](#), Australia | December 2018 - August 2021 | Part-time

- Developed and maintained **Scala-based projects**, later advancing to **Project Lead** for [Agora](#) and [Slagora](#).
- Led the development of multiple projects, including [Agora Android](#), [Agora iOS](#), [Slagora](#), and a [blockchain-based voting platform](#), ensuring security and scalability.
- Mentored **10+ developers** in **Scala, Java, and TypeScript** as part of the [Google Summer of Code](#) program, fostering innovation and technical growth.
- Contributed to **open-source educational and research-driven initiatives**, focusing on **scalable architectures and decentralized solutions**.
- Keywords: **Scala, Play Framework, Swift, Android, IOS, Slack API, Blockchain, Voting, NodeJs, MongoDB, Angular, Akka, Solidity**

Google Summer of Code Intern | [AOSSIE](#), Australia | May 2018 - August 2018 | Full-time

- Selected as a [Google summer of Code 2018](#) intern. contributing to open-source innovation under **AOSSIE**.
- Designed and implemented a **RESTful API** for **Agora Web**, a secure and scalable **blockchain-based voting application**.
- Gained hands-on experience in **distributed systems, cryptographic security in voting systems, and backend scalability**.
- Collaborated with experienced mentors and open-source contributors, strengthening expertise in **Scala, Angular, and API design**.
- Keywords: **Scala, Play Framework, REST API, JWT, MongoDB, JSON**

Java Developer | [Open Data Kit](#) (Data Collection Service), **USA** | March 2017 - May 2018 | Volunteering

- Developed and enhanced key tools like [ODK Collect](#) and [ODK Briefcase](#) for **global data collection**, focusing on **bug fixes** and **new feature implementation**.
- Improved **offline capabilities** and **data synchronization** for seamless field operations in remote locations.
- Implemented **multi-language translation support** on the mobile app, enabling accessibility for a wider range of users across different regions.
- Keywords: **Java, Android, Swing, Digital Ocean, Python**

Java Developer Intern | [MTN](#) (Telecom Service Provider), **Cameroon** | June 2016 - November 2016 | Internship

- Collaborated with the **internal USSD team** to improve **USSD user experience**, optimizing mobile service interactions for customers across Africa.
- Gained hands-on experience with **Java** and **backend development**, contributing to core telecom services.
- Keywords: **Java, Spring Boot, Swing, Java EE, JavaFx, Python**

EDUCATION

- **BSc Computer Science** | University of Buea | Cameroon
- **MSc High Performance Computing** | University of Luxembourg | Luxembourg (2026)

LANGUAGES

- **English (C1)**
- **French (B2)**

REFERENCES

Available upon request.