

Gabriel Achumba

Contact Information:

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 - **Location:** Port Harcourt, Nigeria
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Professional Summary:

A passionate and experienced backend engineer specializing in C++, Python, Go, and Node.js. Skilled in developing high-performance native addons using Node-gyp and Node-API, with a deep understanding of systems programming, memory management, and multi-threading. Adept at crafting efficient and scalable backend services, as well as integrating complex native modules into Node.js environments. Committed to continuous learning and delivering robust, maintainable solutions in fast-paced environments. Passionate and results-driven frontend developer with over 7 years of experience in designing, developing, and deploying high-quality software solutions. Seeking a challenging position where my expertise in Dart, TypeScript, web technologies, cloud computing, and DevOps practices can be leveraged to drive innovation and efficiency

Technical Skills:

- **Programming Languages:** C++, Python, JavaScript, TypeScript, Go, Dart, C#
- **Native Addon Development:** Node-gyp, Node-API, CMake
- **Frameworks & Libraries:** Boost, nlohmann::json, OpenCV, Flask
- **Tools & Platforms:** Git, Docker, Visual Studio Code, MSYS2, Linux, Windows
- **Software Development Practices:** Test-Driven Development (TDD), Agile, Continuous Integration (CI/CD)
- **Web Technologies:** HTML5, CSS3, JavaScript (ES6+), TypeScript, Socket.IO
- **Frontend Frameworks:** React, Angular, Vue.js, Flutter
- **Backend Development:** Node.js, Nest TypeScript, Express.js, Flask, Microservices Architecture
- **Cloud & DevOps:** GCP, AWS (EC2, S3, Lambda), Docker
- **Database Management:** MySQL, PostgreSQL, MongoDB, SQLite

- **Design Patterns:** MVC, Singleton, Factory, Observer, Dependency Injection, MVVM
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Professional Experience:

Software Developer

Syncware Limited | Port Harcourt, Nigeria | Jan 2020 – June 2024

- **Native Addon Development:**
 - Designed and implemented high-performance native addons for Node.js using C++ and Node-gyp, resulting in a 40% increase in application speed for compute-intensive tasks.
 - Integrated complex C++ libraries with Node.js, enabling seamless functionality within the JavaScript ecosystem.
- **Backend Development:**
 - Developed scalable backend services using Node.js and Express, handling RESTful API endpoints and WebSocket communication.
 - Implemented efficient data processing pipelines in Python for backend microservices, optimizing data handling and reducing processing times by 30%.
- **System-Level Programming:**
 - Engineered cross-platform C++ libraries for real-time data processing, ensuring compatibility across Windows and Linux environments.
 - Utilized multi-threading and advanced memory management techniques in C++ to optimize system performance and reduce latency in critical applications.
- **Key Responsibilities:**
 - Lead the development of web applications using JavaScript and TypeScript, ensuring robust and scalable code.
 - Collaborate with cross-functional teams to design and implement user-friendly interfaces using modern frameworks such as React, Angular, and Vue.js.
 - Architect and develop RESTful APIs to support microservices-based systems, focusing on scalability, performance, and security.
 - Design and deploy cloud-based solutions on AWS, utilizing services such as EC2, S3, and Lambda to optimize application performance and reliability.
 - Containerize applications using Docker, orchestrate them with Kubernetes, and manage deployments in a continuous integration/continuous deployment (CI/CD) environment.
 - Apply best practices in software design, including SOLID principles, design patterns, and data structures, to ensure maintainable and efficient code.

- Mentor junior developers, providing guidance on coding standards, testing practices, and architectural decisions.
- Monitor and optimize application performance, conducting code reviews and implementing automated testing to ensure high-quality deliverables.
- **Key Achievements:**
 - Successfully led the migration of a monolithic application to a microservices architecture, resulting in a 30% improvement in scalability and a 20% reduction in system downtime.
 - Spearheaded the implementation of a CI/CD pipeline, reducing the deployment time by 50% and increasing the frequency of releases.
 - Developed a highly responsive and intuitive user interface for a flagship product, which was praised by clients for its usability and design.

Software Engineer

CypherCrescent | PortHarcourt, Nigeria | June 2012 – Nov 2019

- **Project Leadership:**
 - Led the development of a C++ based native addon for Node.js, integrating hardware-level APIs with high-level JavaScript interfaces, streamlining the development of hardware-interfacing applications.
 - Coordinated with cross-functional teams to ensure timely delivery of project milestones, resulting in successful deployments and client satisfaction.
- **Python Scripting:**
 - Automated testing and deployment processes using Python, improving code quality and reducing deployment times by 50%.
 - Developed Python scripts for data analysis and tool integration, enhancing productivity and facilitating better decision-making.
- **Performance Optimization:**
 - Identified bottlenecks in existing C++ codebases and implemented performance optimizations, leading to significant improvements in application speed and efficiency.
 - Optimized database queries and data models, reducing query times by 20% and improving overall application performance.
- **Key Responsibilities:**
 - Worked on full-stack development projects, using TypeScript and Python on the backend and HTML, CSS, and JavaScript on the frontend.

- Integrated third-party APIs and services to enhance application functionality, ensuring seamless data exchange and security.
 - Built and maintained Docker images for various applications, ensuring consistent and reliable deployments across multiple environments.
 - Collaborated with DevOps teams to implement infrastructure as code (IaC) using tools like Terraform and CloudFormation.
 - Conducted performance tuning and optimization of both frontend and backend systems, reducing page load times by up to 40%.
- **Key Achievements:**
 - Played a key role in developing a cloud-native application that scaled to handle millions of users, leveraging AWS services and containerization technologies.
 - Improved the performance of an existing web application by refactoring the frontend codebase, leading to a 25% increase in user engagement.
 - Successfully delivered a critical project on time and within budget, receiving recognition from senior management for excellence in execution.

Education:

Bachelor of Petroleum Engineering

Federal University of Technology | Owerri, Nigeria | 2002 – 2007

Projects:

Real-Time Chat Server (Go + Node.js)

- Developed a real-time chat server using socket.io and engine.io, integrating Go with Node.js for enhanced performance and scalability.
- Implemented authentication and message delivery mechanisms, ensuring secure and reliable communication between clients.

Cross-Platform C++ Library for Node.js

- Created a C++ library to interface with hardware components, exposing APIs to Node.js applications via native addons.
- Ensured cross-platform compatibility and optimized the library for performance-critical operations.

Data Visualization Tool (Python)

- Developed a Python-based tool for visualizing large datasets, integrating with backend APIs and supporting various chart types.
 - Utilized matplotlib and other visualization libraries to generate interactive plots and reports.
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Additional Information:

- **Languages:** English (Fluent)
 - **Interests:** Algorithm design, low-level programming, , and learning about emerging technologies.
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