

# Zakaria Boukernafa

## Senior Software Engineer & Cloud Solutions Architect

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Oran, Algeria | Available CET/GMT+1

### Professional Summary

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Senior software engineer with **6+ years** building scalable cloud solutions across **EdTech, IoT, and Government sectors**. Proven track record delivering enterprise applications and reducing infrastructure costs by **40%** through strategic AWS optimization. Expert in **TypeScript/Python** ecosystem with deep **microservices architecture** and **DevOps automation** experience. Core expertise includes cloud-native applications, microservices architecture, real-time data processing, multi-language platforms, and government compliance systems.

### Work Experience

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#### Senior Software Engineer

*Antalyse Consulting / Remote / January 2023 – Present*

- Architected fault-tolerant AWS infrastructure (ECS, Fargate, ALB) achieving **99.99% uptime**
- Reduced infrastructure costs **40%** and deployment time **30%** through container optimization
- Led **AWS migration strategy** for multiple legacy applications, achieving **15% performance improvement**
- Led team of 4 engineers developing microservices for high-traffic automation platform
- Designed 4 production APIs (TypeScript/NestJS) with optimized response times
- Established code review standards and testing protocols improving deployment success rate

*Technologies: AWS (ECS, Fargate, ALB, CloudFormation), TypeScript, NestJS, Docker, Microservices*

#### Software Engineer

*Freelance Specialist / Remote / September 2019 – January 2023 (3.5 Years)*

#### Key Client Engagements:

- **MyWordz Language Platform** : Full-stack development of EdTech application for German, English, and Mandarin learning with adaptive algorithms and real-time progress tracking
- **GPSLVN Vehicle Tracking** : Enterprise IoT solution for fleet management using SOC architecture with real-time GPS tracking dashboard
- **Dashlet Analytics Platform** : Government reporting system for New Zealand city councils with automated report generation and compliance standards
- Architected **cloud infrastructure** enabling clients to handle significant traffic growth

*Technologies: Python, JavaScript, Flutter, AWS Lambda, PostgreSQL, MongoDB, GraphQL, WebSocket*

### Education

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#### Master of Science, Embedded Systems

*University of Science and Technologies of Oran / Algeria / December 2020*

#### Bachelor of Science, Electronics

*University of Science and Technologies of Oran / Algeria / December 2017*

### Professional Certifications

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**AWS Cloud DevOps Engineer** | Udacity / December 2022

**Enterprise Cloud Developer** | Udacity / December 2019

**AI Programming with Python** | Udacity / September 2019

## Technical Expertise

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**Languages & Frameworks:** JavaScript, TypeScript, Python, Node.js, NestJS, Express.js, Dart, C++, Flutter, AWS Lambda, Serverless Framework

**Cloud & Infrastructure:** AWS (ECS, Fargate, CloudFormation, S3, RDS, Lambda, ALB), Docker, Kubernetes, Jenkins, GitLab CI, Ansible

**Monitoring & Analytics:** Prometheus, Elasticsearch, Logstash, Kibana

**Databases:** PostgreSQL, MySQL, MongoDB, Redis

**APIs & Integration:** REST, GraphQL, WebSocket, Stripe, Cloudinary

**Security:** OAuth, JWT, API Gateway, IAM, SOC compliance

## Key Achievements

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- **Multi-Platform Development:** Built applications across education, government, and enterprise sectors
- **Cost Optimization:** Delivered **40% infrastructure cost reduction** through cloud architecture improvements
- **Performance Excellence:** Achieved **99.99% uptime** and optimized API response times in production
- **Team Leadership:** Led 4-person engineering team and mentored junior developers
- **Cross-Industry Success:** Delivered solutions for EdTech, Government, IoT with domain compliance
- **International Collaboration:** Successfully managed projects across multiple time zones

## Languages & Availability

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**Languages:** Arabic (Native), French (Fluent), English (Fluent), German (Beginner)

**Availability:** CET/GMT+1 timezone, Flexible hours for international collaboration

**Remote Work:** 6+ years distributed team experience, Expert in async communication tools