

Adam Bouafia

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Education

Vrije Universiteit Amsterdam <i>Master's in Global Software Engineering (GSEEM) in Computer Science</i> <ul style="list-style-type: none">◦ Specialization: Software Engineering & Green IT	<i>Sept 2024 – July 2025</i>
Università degli Studi dell'Aquila <i>Master's in Global Software Engineering in Computer Science</i>	<i>Sept 2023 – June 2024</i>
Higher Institute of Computer Science of Mahdia <i>Bachelor's in Computer Science in Software Engineering & Information System</i> <ul style="list-style-type: none">◦ Final Grade: 15.2/20◦ Thesis: Mobile Security App 'M3ak'	<i>Sept 2019 – June 2022</i>

Experience

Flutter Intern <i>Make it Happen</i> <ul style="list-style-type: none">◦ Developed Fiberchat, a full chat & call app clone◦ Built a weather app using Flutter and APIs	<i>Monastir, Tunisia</i> <i>July 2021 – Sept 2021</i>
Developer <i>Atomic IT-Pro</i> <ul style="list-style-type: none">◦ Created M3ak, a security app to alert loved ones◦ App reached 10,000+ downloads with high ratings	<i>Mahdia, Tunisia</i> <i>Jan 2022 – June 2022</i>
Developer <i>Euromed Organization</i> <ul style="list-style-type: none">◦ Developed Dhayen, a mobile security app for a national campaign◦ Contributed to the Algerian national awareness campaign: 'Dhayen, Yakfi, Stop!'	<i>Paris, France</i> <i>July 2022 – Dec 2022</i>
Researcher <i>Vivieb</i> <ul style="list-style-type: none">◦ Optimized energy efficiency in Kubernetes clusters◦ Visualized metrics using Grafana, utilized Kubegreen	<i>Pescara, Italy</i> <i>Nov 2023 – Feb 2024</i>
Master's Thesis Researcher <i>Vrije Universiteit Amsterdam</i> <ul style="list-style-type: none">◦ Developing a blockchain-based energy optimization system for sustainable data centers.◦ Designing a decentralized architecture with Layer-2 blockchain solutions for dynamic workload allocation.◦ Integrating reinforcement learning and simulation tools for real-time energy-efficient workload management.◦ Evaluating the performance and energy efficiency of data center operations using CloudSim Plus and blockchain technologies.◦ Contributing to the Green IT field with innovative blockchain applications for sustainable computing.	<i>Amsterdam, Netherlands</i> <i>Sept 2024 – July 2025</i>

Projects

Think Before You Save (Green Waves Hackathon Winner at TU Delft) <ul style="list-style-type: none">◦ Developed a Chrome extension to calculate and display CO2 emissions from cloud file storage, promoting sustainable digital practices.◦ Awarded winner at the Green Waves Hackathon at TU Delft University for innovative approach to environ-	<i>January 2025</i>
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mental impact awareness.

- Implemented features including file emissions estimation, history tracking, interactive eco-tips, and user notifications using JavaScript, Chrome Extensions API, and @tgwf/co2.

Create a Serverless Kubernetes-based Resource Manager

Nov 2024

- Designed a serverless Kubernetes control plane using on-premise solutions like Knative
- Benchmarked system performance under real-world Kubernetes deployment patterns
- Evaluating scalability and elasticity using latency, throughput, and resource usage metrics

Comparative Evaluation of Energy Efficiency in LLMs

Oct 2024

- Analyzed energy consumption across LLM versions
- Utilized Experiment Runner and DeepEval tools

Smart Fan Project

Sept 2024

- Controlled environmental conditions in real-time
- Used MQTT, InfluxDB, Grafana for data processing

GramApp-Detect-API

July 2024

- Developed API for grammar checking and sentiment analysis
- Leveraged NLP techniques for efficient text analysis

Vehicle Routing Problem Optimization

Dec 2023

- Solved VRPHLB using MILP for delivery optimization
- Applied network optimization techniques

Gas Monitoring System

Feb 2024

- Built a gas monitoring system using Node-RED and InfluxDB
- Integrated Telegram notifications for safety alerts

Certifications

JNCIA-DevOps (Juniper Networks Certified Associate - DevOps)

Nov 2024

IELTS Academic - English B2

May 2023

Skills

Programming Languages: Python, Java, JavaScript, C++, Dart

Containerization and Orchestration: Kubernetes, Knative, Docker

Serverless and Cloud Technologies: Serverless architecture, AWS Lambda, Knative

Distributed Systems: Consistency, fault tolerance, performance benchmarking

Benchmarking and Performance Evaluation: Experiment Runner, DeepEval, latency, throughput analysis

Data Monitoring and Visualization: InfluxDB, Grafana, Node-RED

Optimization and Algorithms: Mixed-Integer Linear Programming (MILP), Network optimization

Natural Language Processing (NLP): Grammar checking, sentiment analysis, API development

IoT and Real-time Control: MQTT, environmental control systems, data processing

Frameworks & Libraries: Flutter, Spring Boot, Node.js

Tools & Technologies: API Development, NLP, IoT, ML frameworks

Languages

Arabic: Native

French: Fluent

English: Fluent

Italian: Proficient