

# MONCEF BOUSSELET

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## EDUCATION

### Master in Networking and Cloud Computing

Sep. 2023 – Jul. 2025

University of Lorraine | Leeds Beckett University | Lulea Technical University

Nancy, FR | Leeds, UK | Skelleftea, SE

- Selected among 2000+ applicants for the Erasmus Mundus scholarship in "Green Networking and Cloud Computing"
- Relevant coursework: Cloud Services, Intelligent Systems and Robotics, Internet of Things, Advanced Wireless Networks, System Engineering, QoS and QoE, Data Analysis

### Master in Data Science and AI

Sep. 2018 – Jul. 2023

National Polytechnic School

Algiers, Algeria

- Ranked in the top 10% of preparatory school students nationwide, selected through a national competitive exam
- Relevant coursework: Advanced Databases, Probability and Statistics, Multivariate Data Analysis, Machine & Deep Learning, NLP, Blockchain, Cloud Computing

## EXPERIENCE

### Cloud Engineer – Intern

Dec. 2024 – Jul. 2025

University of Lorraine

Nancy, France

- Built a decentralized Self-Sovereign Identity (SSI) system with Hyperledger Indy for secure information sharing in the cloud
- Deployed the control agents on AWS with Docker (ECS) and benchmarking of system performance

### Full-Stack Developer – Intern

Jan. 2023 – Jul. 2023

Schlumberger

Algiers, Algeria

- Developed a REST API to log 1000+ transactions/day on a Hyperledger Fabric private blockchain
- Built an app with Flask, VueJS and Docker to manage the BC and deployed it on AWS ECS, reducing penalty costs by 75%

### Data and AI Engineer - Intern

Oct. 2022 – Jan. 2023

Ericsson

Algiers, Algeria

- Trained a YOLO model to help field workers identify devices, with 85%+ accuracy
- Built a PyTorch autoencoder for image denoising; 99% accuracy on MNIST

### Data Analyst - Intern

May 2022 – Jul. 2022

BH Advisory

Algiers, Algeria

- Monitored the construction materials market to spot price and stock trends
- Built web scrapers and displayed data on a VueJS dashboard

## PROJECTS

### Auto-scaling Infrastructure on AWS with Terraform

Jan. 2025

[View on GitHub](#)

- Designed JADE agents to simulate DDoS attacks on EC2, generating 20000+ instances per minute
- Implemented an auto-scalable infrastructure resilient to attacks via Terraform
- Developed VueJS dashboard integrating AWS SDK for CloudWatch metrics monitoring

### Fault Tolerance in Kubernetes Orchestrated Systems

Nov. 2024

[View on GitHub](#)

- Deployed a Python app on Kubernetes cluster with an HPA for load balancing
- Load-tested the system using cURL - Achieved 99.9% uptime
- Real-time resource monitoring with Prometheus and Grafana

### Machine Learning for Drinking Water Quality Evaluation

May 2024

[View on GitHub](#)

- Used chemical features to classify water as drinkable or not
- Trained and compared multiple ML and DL models, reaching 90% accuracy

### Benchmarking GPU Energy Consumption for Deep Learning

Apr. 2024

[View on GitHub](#)

- Built a GPU profiler to test 25+ hyperparameter setups for energy use
- Found an optimal setup with 20% energy savings and top accuracy

## Room Recommender Based on IoT

Nov. 2023

[View on GitHub](#)

- Deployed an app on AWS EC2 to collect IoT data (temperature, noise) and store it on MongoDB
- Developed a decision algorithm to recommend rooms based on user preferences

## Business Game

May 2022

- Led student dev team to build and improve a market simulation game
- Optimized traffic for 12 teams, handling 1000+ req/min on local servers

## NEAT Algorithm Applied to Video Games

Oct. 2022

[View on GitHub](#)

- Rebuilt Flappy Bird and Snake in Pygame with matching gameplay
- Used NEAT to evolve agents without supervised training
- Agents outperformed all tested human players

## Wildfire 3D Simulator

Dec. 2021

[View on GitHub](#) | [Read on ResearchGate](#)

- Segmented Google satellite images with k-means for terrain mapping
- Rebuilt the 3D landscape in Unity for a 100km<sup>2</sup> forest area
- Simulated wildfire spread using a semi-empirical cellular automata model

## Focus AI

Nov. 2021

[View on GitHub](#)

- Optimized a deep learning face tracker to detect loss of focus in real time using Mediapipe
- User tests showed up to 50% boost in focus and productivity

## Online Store Scraper

Apr. 2021

[View on GitHub](#)

- Built scrapers for Amazon, CDiscount, and Materiel.net with price tracking
- Enabled multi-site comparison with 15% average cost savings on products

## AWARDS & CERTIFICATIONS

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**Certifications:** AWS Certified Solutions Architect Associate

**Awards:** 1st Place - Arctic Challenge (Sweden, 2024), 2nd Place - Google DevFest Hackathon 21 (Algeria, 2021)

## SKILLS

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**Programming Languages:** Python, C/C++, Java, PHP/SQL, JavaScript/TypeScript, BASH

**Tools and Technologies:** NumPy, Pandas, Matplotlib, Seaborn, PyTorch, Scikit-learn, Tensorflow, Anaconda, AWS (certified), Terraform, Docker, Kubernetes, Git, CI/CD, Monitoring (Prometheus, Grafana)

**Languages:** English (C2), French (C2), Arabic (Native), Swedish (Basic)