MONCEF BOUSSELAT

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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 prepatory 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 – Present

University of Lorraine   *Nancy, France*

- Built a decentralized identity system with Hyperledger Indy for secure sharing in the cloud
- Deployment 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 blockchain
- Built with Flask, VueJS, Docker and deployed on AWS ECS, reducing penality costs by 75%

Data and AI Engineer - Intern
Oct. 2022 – Jan. 2023

Ericsson   *Algiers, Algeria*

- Used YOLO to help field agents 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
- 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 deep learning 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

View on GitHub

Nov. 2023

- 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

View on GitHub

Oct. 2022

- 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

View on GitHub | *Read on ResearchGate*

Dec. 2021

- Segmented Google satellite images with k-means for terrain mapping
- Rebuilt the 3D landscape in Unity for a 100km² forest area
- Simulated wildfire spread using a semi-empirical cellular automata model

Focus AI

View on GitHub

Nov. 2021

- 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

View on GitHub

Apr. 2021

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

AWARDS & CERTIFICATIONS

Certifications: AWS Certified Solutions Architect Associate
Awards: 1st Place - Arctic Challenge (Sweden, 2024), 2nd Place - Google DevFest Hackathon 21 (Algeria, 2021)

SKILLS

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)