

# MONCEF BOUSSELAT

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## EDUCATION

### Master's degree in Networking and Cloud Computing

Sep. 2023 – Jul. 2025

Lorraine University | Leeds Beckett University | Lulea Technical University

Nancy, FR | Leeds, UK | Skelleftea, SE

- Selected among 23 out of 2000+ applicants for a fully-funded Erasmus Mundus scholarship
- Pursued a joint master's degree between Lorraine University (France), Leeds Beckett University (UK), and Lulea University of Technology (Sweden).
- Currently completing studies with thesis in France, focusing on blockchain systems and cloud deployments.

### Master's degree in Data Science and AI

Sep. 2018 – Jul. 2023

National Polytechnic School

Algiers, Algeria

- Selected from the top 10% students of the country's preparatory schools through a national contest
- Graduated with a grade of 17.5/20 and a "very good" mention

## EXPERIENCE

### Full-Stack Developer Intern

Jan 2023 – Jul 2023

Schlumberger

Algiers, Algeria

- Engineered a REST API, enabling the import/export team to store 1000+ daily transaction records on a private blockchain
- Developed a full-stack web application using Flask, VueJS, and Hyperledger Fabric; containerized the application using Docker and orchestrated deployment on AWS ECS, ensuring scalability for 500+ users
- Solved the problem of lost imported assets which was costing up to 4x of the assets' original values in penalties

### Data and AI Intern

Oct. 2022 – Jan. 2023

Ericsson

Algiers, Algeria

- Implemented an image-recognition models using YOLO to assist field workers with device identification, achieving a classification accuracy of over 85%
- Trained a convolutional autoencoder for image denoising in PyTorch, which reached a 99% reconstruction accuracy on the MNIST dataset

### Data Analyst Intern

May. 2022 – Jul. 2022

BH Advisory

Algiers, Algeria

- Conducted a monitoring mission on the construction materials market to identify price and availability trends and patterns
- Developed web scrapers to automate data collection from company websites and showcased it on a VueJS dashboard

## PROJECTS

### Benchmarking GPU Energy Consumption for Training Neural Networks | Python, PyTorch, Bash

Apr. 2024

- Wrote a GPU profiling tool, which runs training tasks for 25+ hyper-parameters combinations to explore the effect of each on energy consumption
- Achieved best accuracy in the parameter pool with 20% energy savings

### NEAT algorithm applied to video games | Python, NEAT-Python, Pygame | GitHub

Oct. 2022

- Reconstructed 1:1 replicas of popular games such as Flappy Bird and Snake using Pygame
- Trained agents leveraging neuro-evolution algorithms (NEAT), performing better than 100% of human players tested against

### Wildfire 3D Simulator | Unity, C#, Python, Google Earth Engine | GitHub | ResearchGate

Dec. 2021

- Collected and segmented Google satellite imagery with machine learning (k-means) and reconstructed the 3D terrain in Unity
- Simulated forest wildfire spread on a 100km<sup>2</sup> area through a semi-empirical cellular-automata model

### Focus AI | Python, PyTorch, OpenCV, MediaPipe | GitHub

Nov. 2021

- Tuned a face tracking deep learning model for focus monitoring, notifying users' when focus loss is detected
- Logged results showed up to 50% increase in focus and productivity of monitored users

### Online Store scraper | Python, Selenium | GitHub

Apr. 2021

- Built web scrapers for several online stores (Amazon, CDiscount, Materiel.net) with price logging and comparison over time
- Multi-site comparison offered an average of 15% in cost savings on a selection of products

## ADDITIONAL

**Programming Languages:** Python, C/C++, C#, SQL (MySQL), PHP, JavaScript, HTML/CSS, BASH

**Cloud & DevOps Tools:** AWS (EC2, S3, VPC, CloudWatch, ECS, CloudFront), Terraform, Docker, Kubernetes (MiniKube), Git, GitHub (GitHub Actions), Prometheus

**Developer Tools:** VueJS, Node.js, Flask, Laravel, ExpressJS

**Data Science & Machine Learning Tools:** NumPy, Pandas, Matplotlib, Seaborn, PyTorch, Scikit-learn, Tensorflow, Anaconda

**Awards and Certifications:** Arctic Challenge Hackathon Winner (2024), Algerian Engineering Competition Winner (2021), Google DevFest 21 Hackathon Winner (2021)

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