MONCEF BOUSSELAT

Nancy, France | +33753542166 | a.m.bousselat@gmail.com | linkedin.com/in/moncefbousselat | github.com/Somnef | somnef.com

EDUCATION

Master's degree in Networking and Cloud Computing   Sep. 2023 – Present
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
- Pursuing a joint master's degree between UL (France), LBU (UK) and LTU (Sweden).

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

Cloud Development Intern   Dec 2024 – Present
Lorraine University   *Nancy, France*
- Conducting research on the design and implementation of a decentralized blockchain-based system for secure and efficient identity information sharing in cloud environments
- Developing a prototype of the proposed system using Hyperledger Indy, Kubernetes and AWS services
- Evaluating the performance and scalability of the system through extensive testing and analysis

Full-Stack/Cloud 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 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 100km² 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)