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 – 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 Univestiry 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%
- Built and trained a convolutional autoencoder for image denoising in PyTorch, which reached a 99% reconstruction accuracy on the MNIST dataset

PROJECTS

Auto-scaled AWS Infrastructure with Terraform | *AWS, Terraform, Java*   Jan. 2025
- Designed JADE agents to DDoS a server, hosted on EC2 machines capable of spawning 20,000+ instances in under 30s
- Deployed a scalable infrastructure with Terraform to react to intense attacks by ensuring that CPU usage is always below 50%
- Built a front-end application using VueJS and the AWS SDK to monitor CloudWatch metrics on the attacked servers

Distributed System Fault Tolerance Mechanisms with Kubernetes | *Bash, Docker, Kubernetes, Prometheus* | GitHub   Nov. 2024
- Deployed a Python application on Docker containers orchestrated with Kubernetes' HPA based on CPU usage, allowing the system to scale for a load of 30%
- Conducted stress-test attacks through infinite cURL request loops to evaluate the system's scalability and self-healing capabilities, achieved 99% availability
- Leveraged Prometheus to monitor and analyze resource utilization in real-time

Cloud and IoT-based Classroom Provider | *Python, Arduino, MongoDB, MQTT, AWS*   Nov. 2023
- Launched an app on AWS EC2 to collect and log room data from Arduino devices (temperature, noise, lighting...) to MongoDB in order to provide the student with the classroom that best matches their criteria through a tailored decision making algorithm

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)