Ali Alouane, M.Sc.

ML Engineer

✉ Berlin, Germany

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About Me ———————

3+ years of professional experience in machine learning and software development. I am deeply passionate about artificial intelligence and robotics, constantly seeking new challenges and innovations.

Social Network ———

in Ali Alouane

mralioo

portfolio-ali-alouane

Languages ——————

🇩🇪 German ●●●●○

🇺🇸 English ●●●●○

🇫🇷 French ●●●●○

🇹🇳 Arabic ●●●●●

Expertise ———————

Machine Learning   Deep Learning

Reinforcement Learning

Sensor fusion   IoT   MLOps

AWS

Working Experience

04.2022 – 10.2023   **Working Student, Machine Learning Engineer**   <small>TRUEMETRICS GMBH</small>

- Conducted data analysis and visualization to derive actionable insights.
- Developed and fine-tuned machine learning models for optimized performance.
- Established a production pipeline for efficient machine learning deployment.

Technologies Used: Python, AWS, Tensorflow, Scrum

03.2021 – 07.2021   **Intern, Hardware Developer**   <small>DASHFACTORY GMBH</small>

- Programmed and tested embedded systems using C (RTOS) for hardware components.
- Contributed to the design and specification of system requirements.
- Developed interfaces for various hardware components, including sensors and memory buses.

Technologies Used: C/C++, UML, ESP32

09.2018 – 10.2020   **Working Student, Transmission & Hybrid Systems Department**   <small>IAV GMBH</small>

- Contributed to the development of a Reinforcement Learning framework for automotive applications.
- Automated data preprocessing pipelines for enhanced efficiency.
- Implemented and evaluated various reinforcement and supervised learning algorithms.

Technologies Used: Python, Matlab, Pytorch, CI/CD

02.2018 – 05.2018   **Intern, Analytics Group**   <small>BRIDGINGIT</small>

- Assessed Microsoft Azure ML cloud services for enterprise applications.
- Trained and evaluated deep learning models using TensorFlow.
- Deployed and managed models both locally and in cloud clusters using Azure's model management tools.

Technologies Used: Python, Azure Cloud, Tensorflow

05.2017 – 10.2017   **Working Student, Computational Imaging Group**   <small>SONY DEUTSCHLAND GMBH</small>

- Evaluated software for spectral data acquisition and processing.
- Conducted spectral measurements using various acquisition tools.
- Engaged in spectral imaging and data collection for research and development.

Technologies Used: Python, Matlab

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Hard Skills

- Deep Learning Techniques
- IoT
- MLOps

Soft Skills

- Critical Thinking ● ● ●
  - Desire to learn
  - Troubleshooting
- Teamwork ● ● ●
  - Collaboration
- Communication ● ● ●
  - Good listener

Software Skills

- Python
- DL frameworks (Tensorflow, Pytorch)
- Git / DVC
- AWS services
- C++

Education

Study

2018–2024	**M.Sc. in Electrical Engineering**	Technical University of Berlin

Specializing in communication networks and signal processing.

Master Thesis — Neurotechnology Group

Deep Learning Approaches to Decoding Sensorimotor Rhythms for Accurate Cursor Control in Brain-Computer Interfaces Using a Large-Scale Dataset.

2013–2017	**B.Sc. of Electrical Engineering and Information Technology**	Universiy of Stuttgart

Specializing in communication networks and signal processing.

Bachelor Thesis — Institute for Signal Processing

Multidimensional energy disaggregation in residential building via deep learning.

Projects

10.2020	**Bearing Fault Diagnosis using Deep Learning**	Measurement and Diagnostic Institute

Implemented a deep learning-based system for the classification of bearing damages, enhancing diagnostic accuracy and efficiency in industrial machinery maintenance.

08.2020	**NMPC for Inverted Pendulum**	Internet of Things for Smart Buildings

Engineered a solution for double-inverted pendulum swing-up and stabilization, combining model predictive control with reinforcement learning for precise motion control in dynamic environments.

07.2020	**GNU-Radio Meets OpenAI-Gym**	Institute for Telecommunications Systems

Created a novel framework integrating GNU-Radio with OpenAI Gym, enabling the training of reinforcement learning agents in software-defined radio scenarios for improved signal processing and communications.

Certificates

05/2024	**Design Thinking Intensive Training**	.msg

Acquired skills in user research, problem definition, creative ideation, rapid prototyping, and user testing to drive innovation and solve complex problems with a human-centered approach.

08/2018	**Deep Learning Specialization**	deeplearning.ai

Completed a comprehensive series of 3 courses on Deep Learning via Coursera, focusing on neural networks, machine learning, and AI applications.

2018–2020	**Compliance and Integrity/Processes for Engineering**	IAV GmbH

Engaged in an extensive online training program covering compliance, integrity, and process optimization in engineering.

Extra-Curricular Activities

DIY Projects	Build tech projects like an Autonomous Robocar, Smart Home Assistant, and 3D printing models.
Hackathons	Participant in Climathon, DeepBerlin, and Bosch IoT Hackathon.
Clubs	Member of Tunisian Space Association and Deep Berlin Robocars.
Sports	Running and Karate enthusiast, participating in local events.

May 28, 2024 — **Ali Alouane, M.Sc.**