Ali Alouane

Master's Graduate,
Electrical Engineering

👤 25 October, 1992

✉ Goerzallee 135, Berlin 12207, Deutschland

📞 +4915208581699

Ⓢ ali.alouane_3

🌐 https://mralioo.github.io/

@ ali.alouane@outlook.de

🏴 Tunisian citizenship

Social Network ———

in LinkendIn Link

🐙 Github Link

Languages ———

🇩🇪 German   ● ● ● ● ○
🇺🇸 English   ● ● ● ● ○
🇫🇷 French   ● ● ● ● ○
🇹🇳 Arabic   ● ● ● ● ●

Expertise ———

Machine Learning   Deep Learning
Reinforcement Learning
Sensor fusion   IoT   MLOps
AWS

Working Experience

04.2022 – 10.2023   **Freelancer, Machine Learning Engineer**   TRUEMETRICS GmbH

- Collected, labeled, and cleaned datasets for diverse projects.
- 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.
- Managed AWS ecosystem components including Serverless services, Sagemaker, and Storage solutions.

03.2021 – 07.2021   **Intern, Hardware Developer**   DASHFACTORY GmbH

- 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.

09.2018 – 10.2020   **Work Student, Transmission & Hybrid Systems Department**   IAV GmbH

- 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.
- Managed continuous integration and testing utilizing Gitlab CI/CD tools.

02.2018 – 05.2018   **Intern, Analytics Group**   BRIDGINGIT

- 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.

05.2017 – 10.2017   **Work Student, Computational Imaging Group**   SONY DEUTSCHLAND GmbH

- 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.

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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 in these fields.

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	**Master Electrical Engineering**	Teschnische Universität Berlin
	Specialising in communication networks and signal processing.	
	Master Thesis	Neurotechnology Group at TU
	Deep Learning Approaches to Decoding Sensorimotor Rhythms for Accurate Cursor Control in Brain-Computer Interfaces Using a Large-Scale Dataset.	
2013–2017	**Bachelor of Electrical Engineering and Information Technology**	Universität Stuttgart
	Specialising 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**	Mess- und Diagnosetechnik Institut
	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**	Institut für Telekommunikationssysteme
	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

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

Sports	Running and Karate enthusiast, participating in local events.
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.