Reza Alinejad

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EXPERIENCE

FORSCHUNGSZENTRUM JUELICH | Working Student
Sep 2024 – Present | Aachen, DE

- Developed a multimodal acquisition rig with EMG sensors and Multiple cameras(Event-based) and IMU and synchronized their streams.
- Created a Multi-model dataset from the recorded data.
- Worked on training, developing and fine-tuning AI algorithms to train with the created dataset.
- Gained hands-on experience with academical research in the field of machine learning and computer vision and working with Transformers.
- Gained knowledge about LLMs.

SHAHIDZADEH HOSPITAL | Engineering's Intern
Jun 2018 – Aug 2018 | IRAN

- Supported yearly QA testing, calibration, and troubleshooting of critical care medical equipment.
- Documentation and report of the yearly QA.
- Assisted in ensuring compliance with operational and safety protocols.
- Participated in device setup, procurement, and technical support for hospital teams.

EDUCATION

M.SC. BIOMEDICAL ENGINEERING | Anhalt University of Applied Sciences
Apr 2023 – Sep 2025 | Germany

- Program focused on ICU Patient Care Equipment, Medical Technology, Biomedical Computation, Physiological Signal Analysis and Medical Image Processing.

B.SC. BIOMEDICAL ENGINEERING | Maybod University
Sep 2016 – Oct 2020 | IRAN

- Program focused on Electrical Engineering and basics of medical physics, anatomical and physiological structures.
- Dissertation : EEG classification basics and methods on BCI competition dataset in MATLAB

PROJECTS

- Medical Device Risk Management: Designed compliance and risk documentation for exoskeleton design in line with ISO 13485 and MDR.
- EEG Signal Analysis: Recorded EEG data and applied signal analysis and feature extraction using MNE-Python, NumPy and SciPy.
- Skin Cancer Detection Tool: Developed a machine learning model in Python for dermatological screening using classification on open datasets with a GUI.
- Created an RGB image dataset from the Kitchenware, developed an ML model for real-time kitchenware classification
- AR/VR Development: Developing an small ”shooting range” game in unity for virtual reality glasses

SKILLS

ML / Data Science:
PyTorch, TensorFlow, Scikit-learn, MNE-Python, NumPy, Pandas

Software Development:
Git, GitHub, Bash, Linux, OOP, Software Design Patterns, UML

Programming Languages:
Python (fortgeschritten), MATLAB (gut), C/C++ (Grundkenntnisse)

Tools:
Unity, SolidWorks (CAD/CAM), SQL, Arduino

MEDICAL TECHNOLOGY
Clinical Information System • FHIR
MDR • FMEA • CAPA
Quality Management Systmes (ISO 13485, ISO 14971, ISO 10993)
FDA 21 CFR •

COURSEWORK

Medical Imaging Algorithms
Computer Assisted Medicine basics and tools
Computer aided Design and Manufacturing in Medicine with SolidWorks
Data Analysis and Statistical Interpretation

LINKS

LinkedIn:// **ralinejad**

LANGUAGES

English-C1
German-B2
Persian-Native