



Muhammad Shair Afghan

📍 Home : 64297, Darmstadt, Germany

✉ Email: muhammadshair.afghan@stud.h-da.de ☎ Phone: (+49) 1781799913

📅 Date of birth: 14 Sep 1998 🇵🇰 Nationality: Pakistani

ABOUT MYSELF

Motivated Electrical Engineering and Information Technology student with a strong foundation in Python programming and a keen interest in machine learning, artificial intelligence, and cloud networking. Hands-on experience with automation, IoT, and Industry 4.0 technologies, combined with a passion for developing innovative, AI-driven solutions. Currently advancing skills in C and C++ to broaden programming expertise. Eager to contribute to real-world projects and gain practical experience through an internship opportunity.

EDUCATION AND TRAINING

[Mar 2023 – Current]

M.Sc. in Electrical Engineering and Information Technology

Darmstadt University of Applied Science mse.h-da.de/

City: Darmstadt | **Country:** Germany |

Specializing in Automation, AI and Machine Learning applications.

[Aug 2017 – Aug 2021]

B.Sc. in Electrical Engineering

University of Engineering & Technology (UET) www.uet.edu.pk

City: Lahore | **Country:** Pakistan |

Graduated with a focus on power and automation.

WORK EXPERIENCE

City Housing Private Limited

City: Gujranwala | **Country:** Pakistan

[Sep 2021 – Mar 2022]

Electrical engineer

- Collaborated on commissioning electrical systems and optimized site operations.
- Managed production workflows and ensured compliance with safety standards.

Gujranwala Electric Power Company (GEPCO)

City: Gujranwala | **Country:** Pakistan

[Jun 2019 – Aug 2019]

Internship

- Improved fault detection in power distribution systems, reducing operational downtime.
- Gained hands-on experience in managing and optimizing a 132 KV grid.

TECHNICAL SKILLS

Programming & Tools

- Python (NumPy, pandas, PyTorch, scikit-learn), C++.
- Machine Learning Frameworks: PyTorch, MLFlow.
- Cloud Platforms: AWS, Azure.
- Tools: Docker, Git, PyCharm.

Engineering Tools

- MATLAB/Simulink, Proteus, TIA Portal (PLC programming).
- IoT Development: Arduino, Raspberry Pi, MQTT, OPC-UA.

Soft Skills

- Strong communication and teamwork skills.
- Quick learner with a focus on quality and efficiency.
- Problem Solving, Adaptability, Critical Thinking.

PROJECTS

[Apr 2024 – Jul 2024]

Implementation of ML-driven fault detection of Sorting Plant with NVIDIA Jetson AGX Orin DevKit

- Designed a machine-learning-based fault detection system integrated with PLC controllers and NVIDIA Jetson AGX Orin.
- Automated plant operations with real-time monitoring, using MQTT and OPC-UA for Industry 4.0 compliance.

[Sep 2020 – Jun 2021]

Mobile IoT-Based Hydroponic Greenhouse System

- Developed a smart greenhouse system leveraging IoT for real-time monitoring and automation.
- Integrated sensors with Thingier.io for cloud-based remote control and data analysis.

Semester Projects

- Designed a home automation system with IoT devices and smart sensors.
- Automated an alcohol dispenser for COVID-19 safety.
- Worked on speed control of a DC motor using PWM techniques.

CERTIFICATIONS & TRAINING

[Apr 2024 – May 2024]

Programming for the Internet of Things Project

Coursera - Ian Harris (University of California, Irvine)

[Feb 2024 – Mar 2024]

Introduction to the Internet of Things and Embedded Systems

Coursera - Ian Harris (University of California, Irvine)

[Nov 2023 – Dec 2023]

Interfacing with Raspberry Pi & Arduino

Coursera - Ian Harris (University of California, Irvine)

[Jan 2022 – Feb 2022]

Solar Energy Basics

Coursera - Neal Abrams (The State University of New York)

[Dec 2020 – Jan 2021]

Programming for Everybody (Getting Started with Python)

Coursera - Charles Russell Severance (University of Michigan)

LANGUAGES

English

Fluent, IELTS 7.0

German

B1 (progressing to B1/B2)

HOBBIES

Exploring AI applications in real-world problems

Chess, Cooking, Comic Books Reading