



# Muhammad Waleed

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**Work permit**: German

## ABOUT MYSELF

Experienced Python developer with 3+ years in software engineering, specializing in implementing and operating computer vision solutions. Knowledge in ML/CV pipelines, Docker, Kubernetes, and CI/CD with a passion for creating measurable business value through end-to-end AI applications.

## EDUCATION AND TRAINING

[ 04/2021 – 02/2025 ]

### Masters of Media Techonolgy

**Technical University, Ilmenau** <https://www.tu-ilmenau.de/>

**Address**: Ehrenbergstrasse 29, 98693, Ilmenau, Germany |

[ 11/2012 – 07/2016 ]

### B.Sc Electronic Engineering

**University of Engineering and Technology, Taxila** <https://web.uettaxila.edu.pk/>

**Address**: 47050, Taxila, Pakistan | **Final grade**: 2.95

## WORK EXPERIENCE

### Carl Zeiss Jena Gmbh

**City**: Jena | **Country**: Germany

[ 04/2024 – 10/2024 ]

### Master Thesis

- Developed a Qt-based tool for data acquisition and processing that synchronized accelerometer sensor data with camera images using computer vision techniques and increased the registration speed of multispectral images by 90%.

- Implemented a data pipeline for automated acquisition, pre-processing, and storage of sensor and image data to support

intelligent analysis workflows.

### Technical University Ilmenau

**City**: Ilmenau | **Country**: Germany

[ 05/2022 – 09/2023 ]

### Student/scientific Assistant

- Developed a Qt-based software for material defect detection, focusing on structured data acquisition and integration into

automated testing processes.

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automated testing processes.

- Created an ML model for video-based detection of human actions and implemented a data pipeline for the preprocessing and analysis of video data with an increase in precision of 84%.

## PROJECTS

[ 04/2024 – 10/2024 ]

### Implementation of a data acquisition and analysis software for handheld multispectral camera system - Master Thesis

Python, Computer Vision, Software Development, PyQt

[ 12/2022 – 05/2023 ]

### Video Based Human Action Recognition using reservoir computing - Media Project

Python, Computer Vision, Machine Learning, Data Segmentation, Data Analysis

Python, Computer Vision, Web Development, Motor Control, Sensor control, Flask

## LANGUAGE SKILLS

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### Other language(s):

#### English

**LISTENING** C1 **READING** B2 **WRITING** B1

**SPOKEN PRODUCTION** B1 **SPOKEN INTERACTION** B1

#### German

**LISTENING** A2 **READING** A2 **WRITING** A2

**SPOKEN PRODUCTION** A2 **SPOKEN INTERACTION** A2

*Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user*

## SKILLS

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### Programming

Python (computer programming) | Conhecimento de Linguagens de programacao HTML, CSS, Python | SQL | C++

### Technology

computer vision | machine learning | Apache Spark, Apache Kafka, Apache Airflow | Python, Django, Flask, Numpy, Pandas | data engineering | Linux | Git | cloud technologies | data visualisation software

### Soft Skills

Cross-Team Collaboration | problem-solving with digital tools | Agile project management | apply technical communication skills | software design methodologies