

SHEHROZ SHAFIQ KHAN

SOFTWARE ENGINEER

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PROFESSIONAL EXPERIENCE

Maddox AI GmbH

Tübingen, Germany

Software Engineer

Sep 2023 – Present

- Developed and deployed edge software for AI-based visual quality control on NVIDIA Jetson Xavier/Orin devices.
- Automated device setup and GitLab CI/CD pipelines, cutting deployment time from 4 hours to 35 minutes.
- Applied TDD with Pytest and PyLint while building reproducible, scalable ML model deployment pipelines.
- Collaborated with ML, hardware, and backend teams to streamline workflows and ensure seamless integration.

ETAS (BOSCH)

Berlin, Germany

Python Developer Werkstudent

Jul 2022 – Jun 2023

- Redesigned the application's base components to ensure secure communication between ECUs.
- Developed and integrated a new UI version for the app, which led to a 20% increase in user satisfaction.
- Resolved critical bugs to improve application performance by 20% and reduce user-reported issues significantly.

Emumba

Islamabad, Pakistan

Software Engineer

Jan 2022 – Mar 2022

- Designed and implemented REST APIs for SaaS applications.
- Integrated 3rd-party APIs with the core modules of the application for payment gateway, 2FA, and SSO modules.
- Developed and integrated wallets from scratch for a crypto-taxing app and worked in a SCRUM driven environment

Rapidev DMCC

Islamabad, Pakistan

Full-Stack Developer

Aug 2020 – Nov 2021

- Developed data crawlers to extract, clean, and normalize data, improving consistency and reducing errors by 25%.
- Built microservices with Flask, Celery, and RabbitMQ, cutting task execution time by 40% and boosting scalability.
- Optimized crawler management server with DRF and Celery, improving task reliability and decreasing bugs by 20%.
- Led a scraping project, managed a team of 3 engineers, and conducted over 20 technical interviews.

EDUCATION

Otto-Friedrich-Universität Bamberg

Bamberg, Germany

MSc International Software Systems Science

Apr 2022 – Mar 2025

- Advance Data Management, Service-Oriented Architecture, Distributed Systems Architecture and Middleware

COMSATS University Islamabad

Lahore, Pakistan

Bachelor of Science in Computer Science

Sep 2016 – Oct 2020

- Majors: Digital Image Processing, Machine Learning, Data Visualization

PROJECTS

Cropification

- Developed a web-based Deep Learning application for crop detection and vegetation analysis using CNN models (YOLO, R-CNN, FasterR-CNN). Built dataset pipelines for collection, preprocessing, and augmentation, and applied transfer learning to improve accuracy on agricultural datasets. Implemented benchmarking workflows for model comparison and deployed the solution with Django, PostgreSQL, and Heroku, integrating visualization dashboards. Utilized Keras, scikit-learn, Pandas, NumPy, and Matplotlib to ensure scalability and actionable insights.

SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript
- **Web & UI Frameworks:** Django, DRF, FastAPI, Flask, React, Astro, Svelte, TailwindCSS, Tauri
- **Data & AI:** Keras, scikit-learn, NumPy, Pandas, Matplotlib, LLMs (RAG, Fine-tuning, Dataset Curation)
- **DevOps & Infrastructure:** Docker, GitLab CI/CD, AWS, GCP, Redis, RabbitMQ, Linux, Git
- **Testing & Code Quality:** TDD, pytest, unittest, Coverage, PyLint, mypy, ESLint
- **Databases:** PostgreSQL, MySQL, MongoDB