

# Syed Rafay Hashmi

Software Developer

**Address:** Richard-Wagner-Straße 91, 66125, Saarbrücken  
**Email:** syedrafayhashmi@gmail.com

**Phone:** +49 176 77834094  
**LinkedIn:** linkedin.com/in/rafayhashmi

## Professional Profile

Software Developer with hands-on experience building AI-powered applications using large language models, FastAPI, and modern backend/frontend technologies. Designed and delivered end-to-end product features that integrate LLM APIs, data pipelines, and intuitive chat-based UX.

I thrive in fast-moving environments where pragmatic engineering, security best practices, and ownership of features from concept to deployment are essential.

**Primary stack:** Python, C#, FastAPI, WPF, ASP.NET, SQL, React.js

## Education

- |                   |                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| 10/2023 – Present | <b>Master of Science in Computer Science</b><br><i>Saarland University, Saarbrücken, Germany</i>                        |
| 11/2017 – 08/2021 | <b>Bachelor of Engineering (Electronic)</b><br><i>NED University of Engineering &amp; Technology, Karachi, Pakistan</i> |

## Work History

- |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 03/2024 – Present | <b>Student Assistant (Software Developer)</b><br><i>Fraunhofer Institute for Non-Destructive Testing (IZFP)   Saarbrücken, Germany</i> <ul style="list-style-type: none"><li>Built and deployed a FastAPI-based OPC UA to HTTP bridge to enable secure interoperability between industrial systems and AI-driven services.</li><li>Developed an AI-assisted feature in an in-house non-destructive testing application using Azure OpenAI services, enabling natural language interaction for creating and editing Dataflow-Designs and improving overall user efficiency.</li><li>Built a high-precision object measurement tool in Python with OpenCV and contributed to exploratory ML and data visualization tasks for signal analysis and diagnostics.</li><li>Maintained and extended a modular WPF .NET desktop application for sensor data visualization and control in non-destructive testing (NDT) systems, including feature development, bug fixes, and UI modernization using MVVM.</li><li>Built internal tools including a real-time query executor and Grafana dashboards to enhance monitoring and analysis, and created a configurable .NET installer to streamline deployment and also improved overall code quality and documentation.</li></ul> |
| 07/2023 – 10/2023 | <b>Assistant Manager – ADMS</b><br><i>K-Electric – Application Development &amp; Management Services   Karachi, Pakistan</i> <ul style="list-style-type: none"><li>Developed and maintained RESTful backend services using ASP.NET (C#), Entity Framework, and SQL Server, supporting a user base of 3.7M+.</li><li>Integrated a secure payment gateway (PayPro) to enable seamless digital bill payments, improving user experience and reducing manual tasks.</li><li>Created internal tools for customer-facing operations, such as portals for load estimation and cost assessment, and developed an API for tax services, enabling external systems to securely retrieve data.</li><li>Provided support and fixes for bulk email dispatch systems to ensure reliable large-scale communication for bills and customer updates.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 07/2022 – 06/2023 | <b>Management Trainee – IT</b><br><i>K-Electric – Application Development &amp; Management Services   Karachi, Pakistan</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

- Supported maintenance and feature enhancements for customer-facing applications, contributing to system stability and responsiveness.
- Developed internal web tools to digitize manual processes, accelerating service delivery and reducing operational costs.
- Assisted in refactoring legacy codebases to improve performance, maintainability, and compliance with security standards.
- Participated in IT Governance, Risk, and Compliance activities, including change management, audit readiness, and policy updates.

10/2021 – 07/2022

#### Research Assistant (Software Developer)

National Center of Artificial Intelligence – NED University | Karachi, Pakistan

- Led software development for “Eco System Development for EV,” a funded project by AIM-GE LLC (USA), delivering scalable solutions for electric vehicle ecosystem data acquisition and management.
- Designed and deployed a full-stack system to process and visualize industrial energy analyzer data, enabling actionable insights for energy efficiency improvements.
- Optimized firmware for an Indigenous IoT-Based Smart Fan (Tamoor Fans), reducing power consumption and improving data transmission reliability.

## Technical Leadership

---

09/2020 – 10/2021

#### Technical Lead

Google Developer Student Club – NED University Chapter | Karachi, Pakistan

- Designed and delivered 8+ technical workshops on Google Technologies, and additionally organized a 30-day Data Science Bootcamp, collectively upskilling 500+ students in practical coding skills.
- Independently developed and deployed a deep learning-based macular disease detection system as part of the Google Solution Challenge.
- Provided technical guidance and code reviews for student-led projects, ensuring clean architecture and practical deployment readiness.

## Technical Skills

---

**Programming Languages:** Python, C#, JavaScript, C/C++

**Application Development Frameworks:** WPF, ASP.NET, FastAPI, React.js, Flask

**Machine Learning:** LLM integration (OpenAI API, Hugging Face, Ollama), TensorFlow, PyTorch, Scikit-Learn, OpenCV

**Data Science:** Pandas, NumPy, SQL, QuestDB, Matplotlib, Plotly, Power BI

**DevOps & Cloud:** AWS, GCP, Docker, Kubernetes

**Other Tools & Technologies:** Firebase, Git, Linux, Grafana

## Courses & Certifications

---

Full-Stack Developer Nanodegree, Udacity

React Nanodegree, Udacity

Deep Learning Nanodegree, Udacity

Applied Machine Learning in Python, University of Michigan

The Arduino Platform and C Programming, University of California – Irvine

## Additional Skills & Interests

---

**Languages:** English (C1), Urdu (Mother Tongue), German (A1)

**Interests:** Chess, learning German, hiking, photography