

Muhammad Zakaria Masood

Software Engineer — AI & ML Specialist — IT Infrastructure Expert

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Summary

Software Engineer with expertise in **AI-driven development**, **scalable web applications**, and **IT infrastructure**. Passionate about integrating **ML & cloud solutions** to drive innovation, security, and performance optimization.

Professional Experience

Software Engineer ([Gosign.de](#))

Hamburg, Germany 01/2024 - present

- Developed GDPR-compliant web extensions using **TYPO3 (PHP)**, ensuring regulatory compliance.
- Implemented Microsoft **Azure AI services, App Services, and Entra-ID** for secure authentication and automation.
- Contributed to an internal **Chat-Bot project**, improving operational efficiency with **Node.js** and **Next.js**.
- Collaborated in an Agile environment, enhancing teamwork and time management.

Projects

Custom Chat-Bot ([Gosign.de](#))

06/2023

- Developed a web-based **Chat-Bot** using **Node.js** and **Next.js** frameworks.
- Integrated multiple NLP models with custom prompts for each team to enhance automation.
- Implemented **Microsoft Azure authentication** and **Azure Entra-ID group allocation** for access control.
- Improved internal workflow efficiency and response accuracy for organizations.

Gait Recognition Research Using Machine Learning for Covered Body Attire ([Report](#))

10/2023 - 04/2024

- Developed a high-accuracy **biometric gait recognition system** (98%) for individuals with covered attire.
- Trained **Decision Tree and Random Forest classifiers**, optimizing biometric security identification.
- Achieved **98% model accuracy**, surpassing traditional gait recognition benchmarks.
- Addressed privacy and security concerns in biometric authentication through **AI-based solutions**.

Campus Network Design ([University of Sargodha](#))

06/2023

- Designed and configured a **secure campus network** using **Cisco Packet Tracer** technologies.
- Implemented **VPN connectivity** between the main campus and sub-campus.
- Configured **secure protocols** and applied **network security best practices**.

IoT-Based Transport Tracking System ([University of Sargodha](#))

01/2023 - 02/2023

- Developed an **IoT-based real-time transport tracking system** using **NodeMCU ESP8266** and **GPS**.
- Designed and configured the module to provide real-time tracking and monitoring.

Streamlining Client Locker Allocation ([Resource Allocation with Email Automation](#))

06/2024 - 06/2024

- Developed a **Python Script** to automate **client locker allocation**, optimizing resource usage.
- Enhanced **resource utilization** through an optimized allocation process.
- Implemented **email automation**, sending 1000+ custom emails in 10 minutes, including locker metadata.

Online Courses & Certifications

- Certified Microsoft Power Platform Practitioner (Sept 2024) - [Microsoft](#)
- Certified in Cyber-Security (Aug 2023) - [\(ISC\)²](#)
- Python Exercises (Nov 2023) - [w3school](#)

Education

BS Information Technology *University of Sargodha*

Sargodha, Pakistan 2020-2024

Relevant Courses: Object Oriented Programming, Data Structures, Database Systems, Database Administration, System And Network Administration, Internet of Things, Cyber Security, Information Security, Network Design And Management

Skills

- **Web & Application Development:** Expertise in building scalable solutions using **MERN Stack (MongoDB, Express.js, React.js, Node.js)**, **TypeScript**, **RESTful APIs**, and **GraphQL**. Experienced in UI/UX with **Material-UI**, **Tailwind CSS**.
- **Backend & Database:** Skilled in **MongoDB**, **PostgreSQL**, **MySQL**, and **Firebase**. Implemented authentication mechanisms with **JWT**, **OAuth**, and **Firebase Auth**.
- **Cloud & DevOps:** Hands-on experience with **Microsoft Azure**, **AWS**, and **Docker**. Implemented **CI/CD pipelines**, **GitHub Actions**, and managed **Linux servers**.
- **AI & Machine Learning:** Experienced with **TensorFlow**, **PyTorch**, and **OpenAI API**. Specialized in **data processing**, **model training**, and **deployment**.
- **Soft Skills:** Strong in **strategic planning**, **problem-solving**, **team collaboration**, and **Agile methodologies**. Excellent **communication** and **adaptability**.