

# Muhammad Zakaria Masood

Software Engineer — AI & Automation Specialist — Cloud & Backend Developer

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## Summary

Software Engineer specializing in **AI-powered applications** and **workflow automation**, with expertise in building intelligent, scalable, and secure systems. Experienced in developing enterprise-grade solutions using **Python, Node.js, and cloud technologies**. Passionate about transforming complex problems into smart, automated solutions that reduce operational costs by 60% and save 20+ hours weekly through intelligent automation.

## Professional Experience

### Backend Developer

(Gosign GmbH)

Hamburg, Germany (Remote)

01/2024 - Present

- Built custom **n8n automation workflows** to streamline business processes, reducing manual workload by **70%** and improving operational efficiency.
- Engineered scalable backend solutions for international clients using **Node.js, Express, and PostgreSQL**, ensuring high performance and maintainability.
- Developed enterprise-scale **AI-powered Chat-Bot platform** with **Next.js** and **Azure Bot Services**, supporting multiple AI models for text, image, and video processing.
- Implemented features including **Deep Search, letterhead generation, dynamic workflows**, and automated delivery systems.
- Built and optimized **RESTful APIs**, improving data processing speed and reliability by **40%**.
- Developed **GDPR-compliant TYPO3 web extensions** in PHP, ensuring full regulatory alignment.
- Integrated **Microsoft Azure services** (AI, App Services, Entra ID) and **Supabase** to enhance automation and enterprise security.
- Collaborated in Agile sprints, leading backend tasks, mentoring junior developers, and delivering features on time.

## Projects

### Enterprise AI Chat-Bot Platform

(Live Demo)

06/2024 – Present

- Developed cross-platform AI-powered chatbot platform with **Node.js & Next.js**, secured by **Azure Entra ID**.
- Supports **multiple AI models** for text, image, and video processing with features like **Deep Search, letterhead generation, and automated workflows**.
- Designed for **enterprise-scale customer interaction** and workflow automation, reducing response time by **70%**.
- Built with **PostgreSQL, Supabase, NLP**, and **AI Automation** technologies.

### AI-Powered Biometric Gait Recognition System

(GitHub) — (Research Paper)

10/2023 - 04/2024

- Developed AI-powered biometric system identifying individuals by gait even under covered body attire.
- Built custom multi-angle video dataset, extracted landmarks with **Mediapipe**, trained **Decision Tree & Random Forest** classifiers.
- Achieved **98% accuracy**, proving gait as reliable alternative to facial recognition.
- Technologies: **Machine Learning, Mediapipe, Random Forest, Decision Tree, Python**.

### Enterprise Campus Network Design

(University of Sargodha)

06/2023

- Designed secure campus network infrastructure using **Cisco technologies** for 10,000+ users.
- Implemented **VPN connectivity, VLANs, routing protocols**, and **enterprise security policies**.
- Configured **firewalls, IDS/IPS systems**, ensuring **99.9% uptime** and GDPR compliance.

## Education

### BS Information Technology

University of Sargodha

Sargodha, Pakistan

2020-2024

Relevant Courses: Data Structures & Algorithms, Database Systems, Internet Of Everything, Information Security, Network Security, System & Network Administration, Cyber Security, Network Design And Management

## Skills

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- **AI & Automation:** n8n, Power Automate, Supabase Functions, custom API integrations. TensorFlow, PyTorch, OpenAI API, Mediapipe, YOLO, Computer Vision, NLP, and custom model training.
- **Full-Stack Development:** React, Next.js 14, TypeScript, Tailwind CSS, Framer Motion (Frontend). Node.js, Express, Python, PHP (Backend). RESTful APIs, GraphQL, WebSockets.
- **Cloud & DevOps:** Microsoft Azure (AI Services, App Services, Entra ID), AWS, Docker, containerization, CI/CD pipelines, GitHub Actions, Linux administration.
- **Databases:** PostgreSQL, MongoDB, MySQL, Supabase, Firebase. Query optimization, database design, and migration.
- **IT Infrastructure:** Network design, VPNs, routing, switching, enterprise security, GDPR compliance, penetration testing.
- **Soft Skills:** Strategic planning, problem-solving, Agile/Scrum methodologies, team collaboration, mentoring, excellent communication.

## Certifications

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- Microsoft Power Platform Practitioner (Sept 2024) - [Microsoft Learn](#)
- Certified in Cyber-Security (Aug 2023) - [\(ISC\)²](#)
- Python Programming (Nov 2023) - [W3Schools](#)