

# Muhammad Wasay Tahir

## Computer Scientist

I'm a CS student with hands-on experience in LLMs, Generative AI, backend engineering, and HPC. I specialize in building and deploying high-performance AI systems on bare-metal hardware, seamlessly bridging software, hardware, and DevOps. My focus is on system-level engineering where AI intersects with infrastructure



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## EDUCATION

### Bachelors in Computer Science

Namal University

09/2021 - 06/2025

CGPA: 3.51

## WORK EXPERIENCE

### Jr. Software Engineer

EZ MD Solutions

07/2024 - Present

Islamabad, Remote

Achievements/Tasks

- Built backend web and mobile apps and led CI/CD on AWS, boosting system reliability and user experience by building a suite of 4 apps.

Contact: Zeeshan (Product Manager) - +92 30907913843

### HPC Trainee

Pakistan Supercomputing

10/2023 - Present

Mianwali, Pakistan

Achievements/Tasks

- Engineered a 1.2 PFLOPS GPU-based HPC system for LLMs; optimized performance and led technical training in supercomputing

### Software Engineer Trainee

DreamBig Semiconductor Inc.

07/2024 - 09/2024

Karachi, Pakistan

Achievements/Tasks

- Worked on character kernel drivers and Improved network performance using RDMA and SmartNICs; contributed to kernel and user-space driver development.

### AI Intern

ARICON Kunststoffwerk

10/2024 - Present

Germany, Remote

Achievements/Tasks

- As an AI Intern, I develop custom AI solutions for projects like Smart Plant Monitoring and Email Chatbots, ensuring local deployment and secure offline data sharing

### Campus Director

Zindagi Prize

08/2024 - Present

Achievements/Tasks

- Led university-wide social entrepreneurship programs, managing teams and driving project execution from ideation to impact.

## SKILLS

C

C++

Python

FastAPI

LLama

MPI

AWS

Azure

Quantization

Gemma

RAG

Jenkins

Finetuning

PyTorch

TensorFlow

Scikit-learn

Hugging Face

LangChain

Git

## INDUSTRY PROJECTS

### EdgeGuard - Tkxel

- AI-powered offline edge surveillance system built on a Platform-as-a-Service (PaaS) model, leveraging Nvidia Jetson and RISC-V for real-time video analytics.

### SmartEmail - Phunware Inc.

- Intelligent email agent system integrating Gemma and vector search for seamless Gmail Takeout data processing, with one-click cloud sharing for internal teams and local document interaction using Gemma as an offline model.

## PERSONAL PROJECTS

### RISC-V HPC Cluster

Energy-efficient cluster using RISC-V & Intel NUCs; integrated OpenMPI and security monitoring

### Multimodal Anomaly Detector

Utilizing ML and DL a federated based system for detecting anomalies in logs and network traffic

### Custom JPEG Compressor

An image compression tool that uses DCT and Huffman coding to reduce file size with minimal quality loss, offering customizable compression levels based on user preference.

### Game of Life Simulator

Interactive simulation of Conway's Game of Life using C++ and Raylib

## CERTIFICATES

AWS Certified Cloud Practitioner - Udemy

Machine Learning Specialization - DeepLearning.ai

## RESEARCH

RISC-V Based QEMU Cluster | IEEE Xplore, 2024

Low-Cost RISC-V HPC for Edge Computing | ICEPECC