# Muhammad Salman Aziz

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#### Education

## **University of Engineering and Technology**

BSc Electrical Engineering, Communication.

GPA: 3.70/4.0

Thesis: Blind Vision A computer vision based Assistive Technology for blind people

# Peshawar, PK July 2024

### Experience

## **Center for Intelligent Systems and Network Research**

### Machine Learning Engineer Intern

Peshawar, PK

Oct 2023 – Feb 2024

- Designed an object detection system using SSD and YOLO to identify meter readings, improving accuracy by 20% over traditional methods.
- Developed a pipeline for preprocessing and labeled 5000+ images, significantly enhancing training data quality.
- Led a team of two to achieve high-performance results on a critical dataset.

## Navatel

Islamabad, PK

### **Network Engineer Intern**

Sep 2022 - Oct 2022

- Troubleshot network connectivity issues, improving resolution times by 30% using tools like ping and traceroute.
- Built subnetting solutions and optimized DNS configurations to streamline internal network management skills

### **Achievements**

- **Top 25% Talent Globally:** Recognized for exceptional skills and performance in global talent evaluation platforms.
- Top 3% of Engineering Batch: Ranked among the top 3% of students in the Electrical Engineering cohort based on academic performance.
- Prime Minister Laptop Scheme: Awarded to the top 4 students in the batch for academic excellence
- Pakistan Navy Merit Scholarship: Secured for outstanding academic achievements.
- Punjab Group of Colleges Academic Scholarship: For outstanding SSC results

#### Skills

- Programming: Python | C++ | SQL
- AI/ML Frameworks: TensorFlow | PyTorch | Hugging Face | scikit-learn
- NLP: NER | Tokenization | Word Embeddings | Machine Translation | Prompt Engineering | NLTK.
- Computer Vision: Image classification | Object detection | Image segmentation | YOLO | OpenCV
- LLMs: GPT | Llama | Gemini
- MLOps: mlflow | CI/CD | dvc | Docker
- **Deployment:** Streamlit | Hugging Face Spaces

### **Projects**

#### **Opportunities Nexus Platform** | International Hackathon

Nov 2024

- Created a platform to help students find universities, professors, and funding opportunities.
- Integrated AI-powered chatbot using Llama 3.1, delivering personalized guidance to 100+ users.
- Recognized by lablab.ai for innovative design and seamless user experience.

- Developed an assistive technology for visually impaired individuals using Yolov8, OCR, and text-to-speech systems.
- Deployed on Raspberry Pi 5, enabling real-time object detection with a user-friendly interface
- Reduced processing latency by 15% through algorithm optimization

Conversational AI Chatbot Apr 2024

- Built a chatbot with Groq API and Llama 3.1, providing interactive responses via a Gradio UI.
- Achieved deployment efficiency by utilizing Hugging Face Spaces.

### **Fake News Detection using Machine Learning**

Oct 2023

- Constructed a pipeline for preprocessing and trained an RNN model to detect fake news with 85% accuracy.
- Analyzed model performance to refine detection accuracy and reduce false positives.

## **Traffic Sign Detection and Translation**

Dec 2023

• Utilized YOLOv8 for real-time traffic sign detection and translation, achieving 90% accuracy across 10 categories.

## **Leadership & Activities**

- Hackathon Participant: Designed impactful solutions in AI Agents and MindsDB Hackathon by LabLab.ai.
- **DSA Enthusiast:** Solved 70+ leet code problems, focusing on algorithmic efficiency.
- **Project Leadership:** Directed the "Blind Vision" project for assistive technology development.
- Event Organizer: Managed logistics for a school-level award ceremony.
- Professional Memberships: Member of IEEE and IEEE Computer Society.

## **Trainings**

Essential Generative Al Training   Pak Angels	Jul 2024 – Sep 2024
Artificial Intelligence Bootcamp   atom camp	Jun 2024 – Sep 2024
Data Science Bootcamp   atom camp	Jan 2024 – Apr 2024

#### **Courses**

Machine Learning Engineer   Data camp	Sep 2024
Google Soft Skills Program   Google	Jul 2024
Generative AI for Everyone   DeepLearning.AI & Coursera	Feb 2024
TensorFlow Developer Specialization   DeepLearning.AI & Coursera	Sep 2023
Deep Learning Specialization   DeepLearning.AI & Coursera	Sep 2023
Introduction to Computer Vision and Image Processing   IBM & Coursera	Sep 2023
Machine Learning Specialization   Stanford & Coursera	Apr 2023
Python Essential 1   Cisco Networking Academy	Apr 2023