



Khizar Ali

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ABOUT ME

I'm an AI student with a passion for building smart systems that solve real problems. I've worked on projects like emotion detection and learning-based games. I enjoy working with tools like Python, TensorFlow, and OpenCV. I've also been recognized on the Dean's List and received Brown's Medal for top grades. I'm always ready to learn and take on new challenges in AI.

WORK EXPERIENCE

🏢 **Nusys Research Lab** – Peshawar, Pakistan

City: Peshawar | Country: Pakistan | Business or sector: Information and communication

AI engineer

[7 Jul 2025 – Current]

Developed a CV model to detect **face and emotions** using DeepFace and OpenCV.
Implemented logic to verify user actions based on **agent prompts** (e.g., paper on right/left eye).
Built a real-time **webcam interface** for emotion and action detection.
Integrated model responses with AI agent workflows for **interactive wellness tasks**.
Ensured clean, modular code for future **agentic AI integration**.

🏢 **SYNC Intern's** – Remote

City: Remote

artificial intelligence engineer

[10 Sep 2023 – 10 Oct 2023]

- Developed AI models for **Plant Disease Detection** and **Digit Recognition** using CNNs (VGG19, MNIST).
- Preprocessed image data and evaluated models using standard metrics.
- Deployed models using Python (TensorFlow, Keras, OpenCV).
- Collaborated via GitHub and delivered complete documentation and reports.
- Met all deadlines with strong performance and technical accuracy.

🏢 **FAST National University of Computer and Emerging Sciences (NUCES)** – Peshawar, Pakistan

City: Peshawar | Country: Pakistan

TA

[1 Feb 2025 – 31 May 2025]

Served as a Teaching Assistant for the undergraduate course *Artificial Intelligence*. Responsibilities included creating and grading quizzes and assignments, assisting students with conceptual understanding, and supporting the instructor in delivering course material. Also contributed to maintaining academic integrity and providing constructive feedback on student submissions

🏢 **NUTEC** – Peshawar, Pakistan

City: Peshawar | Country: Pakistan

Community needs volunteer mentor

[10 Mar 2023 – 30 Mar 2023]

Security Team Responsibilities

- Monitored entry points to ensure safety and access control for 500+ attendees.
- Managed crowd flow to prevent overcrowding and maintain order.
- Resolved minor conflicts and reported issues to event organizers.
- Collaborated with 10+ volunteers to execute security protocols.

Logistics Team Responsibilities

- Coordinated setup of 20+ stalls, including technical equipment and materials.
- Managed inventory and vendor deliveries to ensure timely event operations.
- Addressed logistical issues, like equipment malfunctions, to maintain schedule.
- Worked with organizers and vendors to support seamless event execution.

EDUCATION AND TRAINING

BS (AI)

FAST Peshawar [22 Aug 2022 – Current]

City: Peshawar | **Country:** Pakistan | **Website:** <https://pwr.nu.edu.pk/> | **Field(s) of study:** Information and Communication Technologies: • Information and Communication Technologies (ICTs) not further defined | **Level in EQF:** EQF level 6 | **NQF Level:** 6

Key Subjects Studied

- Programming (Python, C++), Data Structures, Algorithms
- Operating Systems, Computer Networks, Distributed Computing
- Artificial Intelligence, Machine Learning, Neural Networks, Reinforcement Learning
- Database Systems, Software Engineering
- Linear Algebra, Calculus, Probability & Statistics
- Big Data Analytics, Knowledge Representation

Core Technical Skills

- Python, C++, SQL, TensorFlow, Keras, OpenCV, DeepFace
- ML model development, training, and evaluation
- Real-time CV applications and agent-based AI systems
- Data preprocessing, analysis, and visualization
- Strong foundation in OS, networks, and algorithms

SKILLS

Programming & Technical Skills

Microsoft Office / Python (computer programming) / Python (PyROOT, RDataFrame; ML: Keras, TensorFlow) / Basic knowledge of C++ Python MATLAB and SQL databases / programming: Python, MATLAB and SQL / GIT version control, Linux Command / Gitlab / Version Control System (Git) / Git & Githubs / Python (Big Data/Statistical Analytics / Hadoop - Spark - HDFS (Base) / analyse big data / Data Science: Machine Learning, Data Analysis, Data Exploration, Data Wrangling, Data Visualization / Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / Deep Learning, Reinforcement Learning, Regression, SVM, RF, Naive Bayes, Clustering, LASSO / AI: Machine Learning (classical, Reinforcement Learning, Supervised, Unsupervised) / Machine Learning, NLP / perform data analysis

Non technical

✓ Problem Solving / creatively use digital technologies / Good intercultural communication / manage time / team collaboration

PROJECTS

[10 Sep 2023 – 10 Oct 2023]

Plant Disease Detection System

Developed a deep learning model using **VGG19** to classify images of plant leaves as healthy or diseased. The system includes a **Tkinter-based GUI** for easy user interaction.

- **Technologies:** Python, TensorFlow, Keras, OpenCV, Tkinter
- **Key Features:** Image preprocessing, GUI interface, model accuracy tuning
- **Status:** Completed

Link: https://github.com/Alikhizar142/Sync-Intern-Internship/tree/main/Plant_Disease_Detection

[10 Sep 2023 – 10 Oct 2023]

Handwritten Digit Recognition

Built a Convolutional Neural Network to recognize hand-written digits using the **MNIST dataset**. The model is capable of real-time digit prediction through webcam feed.

- **Technologies:** Python, TensorFlow/Keras, OpenCV
- **Key Features:** Real-time inference, model visualization
- **Status:** Completed

Link: https://github.com/Alikhizar142/Sync-Intern-Internship/tree/main/Digit_recognition

[1 Sep 2024 – 31 Dec 2024]

Solar System Ontology

Created an **RDF ontology in Turtle format** to represent the Solar System, integrating data about planets, moons, and orbits. Designed for linked data applications with **interactive graphs**.

- **Technologies:** Protégé, RDF/Turtle, OWL, OntoGraph
- **Key Features:** SPARQL queries, semantic web linking
- **Status:** Completed

Link: <https://github.com/Alikhizar142/Solar-System-Ontology>

[7 Sep 2024 – 29 Dec 2024]

Pneumonia Detection using CNN

Description:

Deep learning project for diagnosing pneumonia from chest X-ray images. Includes full model training in Jupyter Notebooks and real-time inference via a web interface (Flask and Streamlit)

- **Tech Stack:** Python, TensorFlow/Keras, CNN (fine-tuned VGG16), Pandas, NumPy, Matplotlib, Flask, Streamlit
- **Features:** Upload X-ray images, visualize predictions, adjust hyperparameters, deployable model for inference
- **Live Demo:** Streamlit app hosted online (link included in README)

Links: https://github.com/Alikhizar142/Pneumonia_Detection | <https://pneumoniadetection-teama.streamlit.app/>

[15 Feb 2024 – 31 May 2024]

School Management System (SMS)

A web-based system for managing school operations—student and teacher profiles, class scheduling, attendance tracking, and grade management. Features secure login for different user roles .

- **Tech Stack:** Frontend with HTML, CSS, JavaScript; Backend in PHP; MySQL for the database
- **Features:** User authentication, role-based access, ER diagram and proposal documentation included, full CRUD functionality
- **Documentation:** README includes setup instructions and ERD.

Link: <https://github.com/Alikhizar142/School-Management-System-SMS>

[1 Apr 2024 – 31 May 2024]

Facial Emotion Detection using Deep Learning

A real-time facial emotion recognition system that detects human emotions (such as happy, sad, angry, neutral, surprise, disgust, fear) from webcam input. Utilizes a CNN trained on standard datasets like FER-2013 or JAFFE, combined with OpenCV for face detection and live video feed.

Link: <https://github.com/Alikhizar142/Facial-Emotion-Detection-using-Deep-learning>

LANGUAGE SKILLS

Mother tongue(s): Urdu

Other language(s):

English

LISTENING B2 **READING** C1 **WRITING** B2

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HONOURS AND AWARDS

FAST National University of Computer and Emerging Sciences (NUCES)

Brown's Medal

Awarded the prestigious **Brown's Medal** for securing the highest GPA in the department during **Spring 2023** and **Fall 2023** semesters. This medal recognizes academic excellence, consistency, and exceptional performance across all registered courses, distinguishing the recipient as a top scholar among peers.

FAST National University of Computer and Emerging Sciences (NUCES)

Deans List

Recognized on the **Dean's List of Honor** for two semesters (**Fall 2022** and **Fall 2023**) for achieving top academic standing. This distinction is awarded to high-performing students who consistently demonstrate academic excellence and rank among the top percentile of their class.