

Tafreed Ahmad

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[Github](#) [LinkedIn](#)

Education

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology

Bachelor of Science, Artificial Intelligence

Topi, Pakistan
2021-2025(expected)

- Awarded Deans Honor List.
- Relevant coursework: Machine Learning, Natural Language Processing, Computer Vision, Reinforcement Learning, Data Mining, Robotics, Neural Networks, and Human-Computer Interaction.

Government College University

Pre-Engineering

Lahore, Pakistan
2019-2021

Experience

Mitacs Globalink Research Internship

Research Intern at University of Calgary

Calgary, Canada
June 2024 - August 2024

- AIxAR: Combining Augmented Reality with AI for Immersive Media.
- Human Computer Interaction: Seamlessly interacting with digital worlds within the physical space, instead of touching or interacting with a screen.
- Mentorship: Working under Prof. Ryo Suzuki at Interactions Lab at University of Calgary.
- Research Submissions: Submitting our work in top conferences in HCI like CHI'25.

Shartcut

Junior Web Developer

Lahore, Pakistan
May 2023 - present

- Developed and maintained web applications using JavaScript and PHP, focusing on dynamic, responsive front-end features.
- Implemented real-time communication in backend systems using Node.js and Socket.io, optimizing socket handling for improved performance.

Upwork

Web and App Developer

Remote
September 2023 - present

- Worked on three to four different style of projects related to web and app development.
- Positive feedbacks on profile from happy clients. [Link](#)

Publications

1. Submitted Paper: Reality Summary: Exploring On-Demand MR Text Summarization and Question Answering using Large Language Models, Submitted at the *Conference on Human Factors in Computing Systems (CHI'25)*.
2. Published Paper: First Author, " The YOLOv8 Edge: Harnessing Custom Dataset for superior Real-time Detection," *Published at the International Conference on Emerging Trends in 2023 (ICET23)*, Peshawar, 6-7 November 2023. [Link](#)
3. Published Paper: "Influencing Factors in Facial Recognition and Verification: A Siamese Neural Network Hyperparameter Study," *Published at the 2024 International Conference on Engineering & Computing Technologies (ICECT)*. [Link](#)

Leadership and Activities

IEEE GIK - Event Coordinator

February 2024 – present

Google Developer Student Club - Core Team Member

December 2022 – present

Personal Projects

Real-time Object Detection

- Technologies used: Python, YOLO.
- Project Description: Implemented object detection using YOLO for images and video footage.
- Key Features: Object detection, image analysis, model training.
- Use Cases: Object detection in images and real time video footage.

E-commerce Price Prediction with Machine Learning

- Technologies used: Python, scikit-learn, pandas, Jupyter Notebook
- Project Description: Applied machine learning techniques to predict the prices of products in an e-commerce dataset specific to Pakistan. Conducted in-depth data analysis, preprocessing, and feature engineering to improve model accuracy.
- Key Features: Machine learning model development, feature engineering, data analysis, and preprocessing.
- Use Cases: Price prediction for e-commerce products in the Pakistani market.
- Additional Information: Authored a comprehensive report (journal) detailing the project's methodology, findings, and insights, highlighting the significance of machine learning in the e-commerce industry.

Hostel Lending System

- Technologies used: React, Node.js, React Router, Redux, Axios, JWT, Bcrypt.
- Project Description: Implemented user authentication and chat functionality for efficient hostel property management.
- Key Features: User authentication, chat feature, database design.
- Use Cases: Efficient hostel property management.

GikiEats

- Technologies used: React Native, Redux, RESTful APIs, JWT.
- Project Description: Developed a cross-platform mobile app for easy access to food delivery services.
- Key Features: Cross-platform mobile app development, state management, API integration.
- Use Cases: Easy access to food delivery services.

Chat Application

- Technologies used: MERN stack, socket.io.
- Project Description: Developed a real-time chat application for seamless communication and collaboration.
- Key Features: Real-time messaging, user interaction.
- Use Cases: Real-time communication and collaboration.

Open Source Contributions for GSoC'23:

- Technologies used: Svelte, Python
- Project Description: Solved an issue on their open source repository *Mathesar*.

Certifications

- Unsupervised Learning, Recommenders, Reinforcement Learning (Stanford Online)
- Advanced Learning Algorithms (Stanford Online)
- Supervised Machine Learning : Regression and Classification (Stanford Online)

Skills & Interests

Technical: Programming: Python, C++, JavaScript, Web: Three.js, WebGL, Blender. Development: MERN Stack, React, React Native, Node.js, Next.js, Swift.js. Database: Oracle, Prisma, PostgreSQL. ML/DL: Tensorflow, Pytorch, LLM, Natural Language Processing. Tools: Git, Github, Jira

Language: English: Fluent

Interests: Machine learning and deep learning applications, 3D modeling and graphics, AR