

# MUHAMMAD HUZAIFA ZEB

Artificial Intelligence Engineer

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## Summary

Machine Learning Engineer and AI undergraduate with practical experience in building and deploying deep learning and machine learning models for real-world problems. Skilled in Python, TensorFlow, PyTorch, and Scikit-learn, with hands-on work in computer vision and NLP through internships and projects. Motivated to create ethical and impactful AI solutions.

## Experience

### Eziline Software House Pvt Ltd

July 2024 – October 2024

Machine Learning Engineer

Rawalpindi, Pakistan

- Gained hands-on experience in developing machine learning models for prediction and classification tasks during internship at Eziline Software Company Ltd.
- Worked on Natural Language Processing (NLP) tasks, including text classification and sentiment analysis using Python.
- Implemented computer vision solutions using OpenCV for image processing and object detection.
- Trained and fine-tuned deep learning models with TensorFlow and Keras for various AI applications.
- Collaborated with a technical team to deploy and integrate AI models into real-world software systems.

### Code Alpha

May 2024

Machine Learning Engineer

Remote

- Designed an image-to-caption generator using deep learning models, achieving 85% accuracy.
- Developed a high-accuracy spam email detection system using Label Encoding, Count Vectorization, and Multinomial Naive Bayes to enhance email security and user productivity.
- Created a Tic Tac Toe game using Python, incorporating AI for single-player mode.

### Mari Energies Limited

August 2025 – September 2025

IT Intern (Networks, Systems & Operations)

Mari Field, Daharki

- Gained hands-on experience in IT Infrastructure and Operations supporting industrial environments.
- Worked with enterprise networking technologies including Cisco switches, VLANs, and port security.
- Assisted in data center operations, environmental monitoring, and unified communications (VoIP/IP Telephony).
- Supported ERP processes using SAP, including Purchase Requisitions and Material Issue Vouchers.
- Participated in IT asset lifecycle management and IT service management using ManageEngine ServiceDesk Plus.
- Monitored network and system performance using PRTG monitoring tools.
- Visited field sites including Wells, Rigs, CMF-I, CMF-II, and MDCPF to observe IT support for critical industrial operations.

## Education

### Bahria University

Islamabad

Bachelor of Science in Artificial Intelligence

January 2026

### Army Public School for Boys, Ordnance Road

Rawalpindi

Faculty of Science (FSc)

2019 – 2020

## Projects

### Giftnix AI Model Development (Final Year Project) — Python, TensorFlow, Scikit-learn

2025

- Developed an end-to-end AI-based fraud detection model for E-commerce transactions using a CNN-based architecture.
- Performed large-scale data preprocessing, feature engineering, and class imbalance handling to improve fraud recall and precision.
- Optimized decision thresholds using ROC and Precision-Recall analysis to enhance real-world fraud detection performance.
- Deployed the trained model with a prediction pipeline capable of handling real-time transaction inputs for the Giftnix platform.

<b>Traffic Sign Recognition</b> — <i>Python, TensorFlow, CNN</i> <ul style="list-style-type: none"> <li>Developed a convolutional neural network to classify traffic signs using image data with high accuracy.</li> <li>Employed data augmentation and preprocessing to enhance model generalization for real-world scenarios.</li> <li>Supported intelligent transport systems and autonomous vehicles with precise recognition capabilities.</li> </ul>	2025
<b>Image Caption Generator</b> — <i>Python, TensorFlow, Keras, LSTM</i> <ul style="list-style-type: none"> <li>Built an image captioning model using VGG16 for feature extraction and LSTM for sequence generation.</li> <li>Processed the Flickr8k dataset to train the model for generating human-like captions for uploaded images.</li> <li>Deployed the application using Streamlit for an interactive user interface with real-time predictions.</li> </ul>	2024
<b>Pet Classification</b> — <i>Python, TensorFlow, Keras</i> <ul style="list-style-type: none"> <li>Created a CNN-based model to classify images as either dog or cat with high accuracy.</li> <li>Incorporated transfer learning (VGG16), data augmentation, and real-time prediction via Streamlit.</li> <li>Enabled training from scratch or inference via user-uploaded images through a user-friendly app.</li> </ul>	2024
<b>Gender Prediction Using CNN</b> — <i>Python, PyTorch</i> <ul style="list-style-type: none"> <li>Designed and trained a CNN model to predict gender from facial images using supervised learning.</li> <li>Conducted preprocessing and model tuning to boost accuracy and reduce overfitting.</li> <li>Delivered predictions via a Streamlit app with an intuitive interface.</li> </ul>	2024
<b>Technical Skills</b> <hr/> <b>Languages:</b> HTML, CSS, JavaScript, React, Node.js, Express, MongoDB, REST APIs, Git, Linux, Deployment <b>Software Tools:</b> Dev C++, No SQL, Proteus, Latex Overleaf, Cisco, Anaconda Navigator, Jupyter, Spyder, VMWare (Ubuntu) <b>Machine Learning Tools:</b> PyTorch, Scikit-learn, TensorFlow, Pandas, NumPy <b>Soft Skills:</b> Teamwork, Multi-tasking, Leadership, Problem Solving, Communication	
<b>Certifications</b> <hr/> <b>Machine Learning With python (IBM Certified)</b> <b>Data Visualization Using Python (Great Learning)</b> <b>Python For Data Science (IBM Certified)</b> <b>The Art Of Prompt Engineering (IBM Certified)</b>	