



MUHAMMAD HAMZA KALEEM

AI & Machine Learning Engineer

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AI & Machine Learning Engineer with extensive hands-on experience in Artificial Intelligence, data analysis, and predictive modeling. Proficient in designing, training, and deploying scalable machine learning solutions utilizing Python, Scikit-learn, TensorFlow, and advanced Natural Language Processing and Computer Vision techniques. Effective communicator with a commitment to clean code, collaborative teamwork, and delivering impactful AI solutions that drive tangible results.

Experience

Machine Learning Intern | EnlivenAI LLC - Pakistan February 2025 - April 2025

- Collaborated with a cross-functional team to build and optimize machine learning and deep learning models for real-world applications using Python, Scikit-learn, TensorFlow, and Keras.
- Gained hands-on experience in Natural Language Processing (NLP) and Computer Vision projects including text classification, entity recognition, and object detection with tools like BERT and YOLOv5.
- Enhanced teamwork, problem-solving, and communication skills by working in agile sprints, contributing to code reviews, and translating technical work into business impact.

Machine Learning Engineer | Self Employed - Remote May 2025 - Present

- Independently designed and deployed end-to-end AI solutions, including model development, API integration, and dashboard creation using Streamlit, Flask, and Docker.
- Built and deployed NLP and CV pipelines using OpenCV, spaCy, and transformers, solving problems like document classification, sentiment analysis, and image-based detection.
- Applied MLOps practices for version control, modular coding, and real-time inference; collaborated with international clients and managed projects from problem definition to delivery.

Education

Bachelor's Degree in Artificial Intelligence | Islamia University of Bahawalpur - Pakistan January 2024 - Present

- GPA: 3.51

Projects

Diabetes Risk Prediction Web Application | Academic - Machine Learning June 2024 - August 2024

- Built and deployed an interactive ML-powered web app using Streamlit and scikit-learn, enabling users to input health metrics and receive real-time diabetes risk predictions with 90% accuracy, achieving over 1,000+ users and promoting accessible healthcare insights.

YOLOv8-Powered DataMatrix Detection System | Freelance - Computer Vision Jun 2025 - July 2025

- Engineered a high-precision object detection pipeline using YOLOv8 to identify and extract DataMatrix codes from user-submitted images, enabling automated decoding and real-time value retrieval; trained on a custom-labeled dataset of thousands of images to support a production-grade client solution.

Spam Message Classifier using BERT | Personal - Natural Language Processing January 2025 - February 2025

- Built an advanced spam detection system using BERT-based transformer models, capable of classifying messages as spam or ham with high accuracy; implemented text preprocessing, tokenization, and fine-tuning on labeled datasets, achieving over 95% precision in real-time classification tasks.

Certifications

Data Analysis with Python | freeCodeCamp July 2024 - August 2024

Supervised Machine Learning | Stanford University-Online October 2024 - November 2024

Python For Machine Learning | Great Learning February 2024 - April 2024

Skills

Artificial Intelligence | Machine Learning | Deep Learning | Computer Vision | Natural Language Processing (NLP) | Reinforcement Learning | Chatbot Development | Data Handling & Engineering | MLOps

Languages

English - Conversational | Urdu - Native