EBADULLAH HASHMI

AI Engineer

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PROFILE

BS Computer Science graduate specializing in Artificial Intelligence, Machine Learning, and Data Science. Experienced as a Trainee AI Engineer at HiveWorx Pvt. Ltd., working with Python, Pandas, NumPy, machine learning and deep learning models, and Retrieval-Augmented Generation (RAG) systems. Proficient in exploratory data analysis, feature engineering, model training, and building end-to-end AI pipelines.

WORK EXPERIENCE

NUST SEECS, Islamabad *Aug 2026 – Present*

AI Engineer Intern

- Design and implement machine learning and deep learning solutions to address data-driven problems.
- Conduct research and experimentation to optimize model architecture, supporting scalable and efficient AI deployment.

HiveWorx, Islamabad *Jun 2025 – Dec 2025*

AI Engineer Intern

- Performed data profiling, exploratory data analysis, outlier handling, and feature engineering to ensure high-quality datasets.
- Trained, evaluated, and optimized machine learning models using cross-validation, hyperparameter tuning, and regularization.
- Built and fine-tuned deep learning models (CNN, ResNet50, YOLO11) for image classification tasks.
- Developed API-based applications with JSON input/output for AI model deployment.

EDUCATION

Institute of Space Technology (KICSIT Campus) *Mar 2022 – Feb 2026*

BS Computer Science

Python, Java, C/C++, SQL | Data Structures and Algorithms | Machine Learning, AI, Data Analysis | AI Model Deployment

Punjab Group of Colleges *Jan 2019 – Feb 2021*

Intermediate (F.Sc. – Computer Science)

Computer Science, Mathematics, Physics

SKILLS

Python | Machine Learning (Supervised, Unsupervised, and Reinforcement) | Deep Learning (CNN, ResNet50, YOLO11) | Natural Language Processing | Computer Vision | TensorFlow / Keras / PyTorch | Data Analysis (NumPy, Pandas) | Data Visualization | Feature Engineering and PCA | Model Training and Evaluation | C++/C | Java

CERTIFICATIONS

Data Science & AI/ML (Aug 2025)

Python (NumPy, Pandas), SQL, Machine Learning, EDA, Data Visualization, PCA, Model Evaluation and Selection, Deep Learning, LLM Fundamentals, Generative AI, Hands-on Projects

Python Programming (Sep 2025)

Core Python, Object-Oriented Programming, Data Structures, File Handling, Projects

Certifications & Internship Link: Google Drive Folder

PROJECTS

RAG-Based AI Teaching Assistant

Python, FFmpeg, Whisper large-v2, bge-m3, Ollama, RAG, Cosine Similarity, DeepSeek R1, GPT-4

- Built an end-to-end pipeline that converted 18 lecture MP4 files to MP3 using FFmpeg, transcribed and translated Hindi audio to English using Whisper large-v2, and segmented the output into timestamped JSON chunks containing video title, number, and start/end time.
- Merged chunks (n=5), generated vector embeddings via a locally hosted bge-m3 model (Ollama), and stored them in a Pandas/joblib vector store; built a RAG pipeline using cosine similarity with DeepSeek R1 and GPT-4 to answer student queries with corresponding video and timestamp references.

Emotion Detection Using CNN and FER-2013 Dataset

Python, TensorFlow, Keras, ResNet50v2, VGG16, OpenCV, Gradio

- Addressed class imbalance in the FER-2013 dataset by employing image augmentation and class weights, improving model robustness.
- Designed and iterated on custom CNN models, including advanced architectures such as VGG16 and ResNet50v2, to optimize performance.
- Achieved a 66% overall accuracy on emotion classification, with the final model based on ResNet50v2, detailed through precision, recall, and F1-scores across 7 emotion labels.
- Deployed the model for real-time emotion detection in live video streams using Gradio and OpenCV, showcasing emotion labels dynamically on-screen.
- Shared the source code on GitHub for community engagement.

MLflow Model Insights & Tracking

MLflow, Model Lifecycle Management, Python

- Implemented an experiment tracking system using MLflow to log hyperparameters, evaluation metrics, and model artifacts, providing visibility into model iterations.
- Streamlined lifecycle management to enable comparison of runs, visualization of training curves, and informed selection of algorithms for production.

LANGUAGES

English | Urdu | Punjabi