

Mushaim Khan

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Profile

Computer Science graduate with hands-on experience in machine learning and software development. Built multiple AI-driven projects including chatbots, document retrieval systems, and video captioning tools. Skilled in Python, deep learning frameworks, and end-to-end project development, with a strong interest in applying AI to practical applications.

Skills

Languages: Python, SQL, JavaScript

Frameworks: PyTorch, TensorFlow, scikit-learn, Hugging Face Transformers

Tools: Docker, Git, SQLite, Flask, Gradio

Domains: Natural Language Processing, Deep Learning, RAG Systems, Anomaly Detection

Experience & Projects

ToneBot (2025) – AI-powered chatbot for emotional tone rewriting and detection

- Implemented tone classification using Hugging Face Transformers (BERT, RoBERTa) to rewrite messages into professional, empathetic, or casual tones.
- Built a Gradio interface with SQLite-based logging and deployed on Hugging Face Spaces.
- Designed for scalability, with planned integration into a Chrome Extension.

Local Document Search (2024) – Retrieval-Augmented Generation (RAG) pipeline

- Developed semantic search for personal PDFs using FAISS and Hugging Face embeddings.
- Integrated RAG with LLMs to provide context-aware answers from documents.
- Wrote Pytest-based automated evaluation to measure retrieval accuracy.

Scribe (2024) – Video captioning and anomaly detection system

- Built an encoder-decoder pipeline with LSTM decoder for caption generation, refined with GPT-based text.
- Implemented anomaly detection to raise alerts during unusual events in video streams.
- Designed with applications in accessibility and real-time safety monitoring.

Innovative Interview (2023) – AI-driven interview simulation platform

- Developed an AI-powered system to simulate adaptive interview scenarios using NLP techniques.
- Dockerized the application for reliable deployment in testing environments.
- Implemented dynamic question generation and real-time feedback loop.

Dungeon Escape (2023) – Python-based text adventure game

- Built a replayable dungeon crawler with combat, loot mechanics, and random event generation.
- Used `colorama` and emojis to enhance immersion in a text-based RPG.

Poll App (2022) – Web-based polling platform

- Created a responsive web app enabling users to create, share, and vote in polls.
- Implemented authentication and real-time vote updates for interactive usage.

Certifications & Training

- CS50's Introduction to Programming with Python – Harvard University (2025)
- Machine Learning Specialization – Coursera (Andrew Ng) (2024)

Education

Bachelor of Science in Computer Science
COMSATS University Islamabad (2021 – 2025)
APSACS — F.Sc. (2019 – 2021)