

# Fatima Mir

AI Engineer | Backend Developer

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## Summary

Driven BS-IT graduate with 1.5 years of experience in cutting-edge AI, specializing in deep learning, computer vision, NLP, and data mining. Proven ability to develop and deploy innovative, AI-driven solutions. Passionate about building intelligent systems and pushing the boundaries of machine learning and AI.

## Professional Experience

### AI Engineer | FireFly Tech. Solutions

Islamabad, Pakistan | Aug 2024–Present

Focused on multi-agent AI systems, RAG, and domain-specific chatbots, including backend development in Python and Node.js, deployment, and ongoing maintenance.

### AI/ML Engineer Intern | Funsol Technologies (Pvt.) Ltd.

Islamabad, Pakistan | Feb 2024–Jul 2024

Contributed to AI solutions, including document QA systems, face recognition pipelines, object detection models, and large-scale voice cloning projects.

### Web Front-End Developer Intern | SOFTOO, Brillanz Group

Islamabad, Pakistan | June–July 2022

Contributed to web development and responsive UI/UX enhancements.

## Projects

### AI Attorney – Pakistan Legal Chatbot | FireFly Tech. Solutions

- Built a legal chatbot using langchain, OpenAI, FAISS, Whoogle, Redis, and BM25 vector stores with embeddings of ~200k cases/statutes.
- Implemented multi-agent query classification for legal advice, precedent search, and statute lookup.
- Enabled automatic generation of legal drafts and templates for lawyers.
- Integrated TTS/STT pipelines using Whisper, reducing latency by ~40%.
- Deployed system via FastAPI and Docker with a Whoogle container for web search, achieving 95% relevance in retrieval-based answers.

### CMontheGo – AI Marketing Assistant | FireFly Tech. Solutions

- Developed a multi-agent marketing assistant performing automated SEO, website, and social media audits
- Collected marketing data using web scrapers and platform APIs
- Generated actionable recommendations via LLM-based summarization.

### Chat with PDF – Document Q&A System | Funsol Technologies

- Built a RAG-based chatbot allowing natural language queries on PDF documents
- Implemented Hugging Face Transformers and OpenAI APIs, improving answer relevance by ~30%.

### Voice Cloning – Celebrity Voice Models | Funsol Technologies

- Trained 50+ voice models of famous personalities by extracting audio data from YouTube.
- Processed and cleaned voice datasets for high-quality training.
- Used Apilio locally to train models for accurate voice cloning.
- Enabled text-to-speech generation in the cloned voices for AI applications

### AI Gallery – Face Recognition Photo Organizer | Funsol Technologies

- Clustered and tagged photos using face recognition models.
- Optimized face embedding pipelines, achieving >90% accuracy with deepface (facenet-512).

### Object Recognition Models | Funsol Technologies

- Fine-tuned YOLOv5 on a custom object detection dataset to detect domain-specific objects.

## Technical Skills

**Core AI/ML:** Deep Learning, Computer Vision, Vector Databases, NLP, Data Mining, LLMs, RAG, Fine-Tuning, Model Training

**Backend & DevOps:** SQL, Docker, Flask, Node.js, Python, TypeScript

**ML/DS Tools:** OpenCV, NumPy, PyTorch, TensorFlow, NLTK, LangChain, OpenAI API, Hugging Face, Ultralytics (YOLOv8), Roboflow, Deepface

**Version Control:** Git

## Education

### BS in Information Technology

2019-2023

Quaid-i-Azam University, Islamabad

CGPA:3.3/4