Abdul Samad Gilal

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Education

FAST - NUCES, Karachi	*Class of 2027*

Masters in computer science

Course Work: Advanced Machine Learning, Natural Language Processing, Deep Learning, Advanced Analysis of Algorithms, Applied Computer Vision, Applications of Blockchain

Mehran University of Engineering & Technology, Jamshoro	CGPA: **2.95/4.0**
Computer Systems Engineering	Percentage: **75%**

Course Work: Data Structures, Databases, Embedded Systems, Software Engineering, Web Engineering, Data Science, Object Oriented Programming

Skills

Programming Languages: Python | JavaScript | Java | Kotlin
Computer Vision Frameworks: Yolo V8 | TensorFlow | MediaPipe
Agentic AI Frameworks: LangChain | LanGraph | LangSmith | n8n
Backend Frameworks: NodeJS, Django, Express JS
Databases: MySQL | MongoDB | Pinecone Vector Databases
Libraries: Pydantic | Numpy | Pandas | ScikitLearn |

Experience

AI/ML Engineer – Data Pulse Tech LLC, NASTP	**Oct 2025 - Present**

As an Agentic AI Developer at Data Pulse Tech LLC (NASTP), I work with Google's ADK and MediaPipe to build intelligent computer-vision pipelines. My role focuses on designing, optimizing, and deploying AI/ML solutions that automate analysis and enhance real-time decision-making.

Self-Employed – Freelancing	**June 2023 – Present**

Worked on projects involving backend development with Python (FastAPI, Django) and Node.js (Express.js), building APIs, integrating databases, and handling client requirements. Added AI features and automation using tools like LangChain, n8n, and LangGraph to improve workflows. Collaborated with clients to deliver functional solutions such as backend systems, automation scripts, and AI-based assistants.

Projects

AI Customer Support Agent

Built an AI-powered support assistant that connects to multiple channels (email, chat, and web forms) and automatically responds to customer queries. Used LangChain for prompt orchestration, LangGraph for managing agent flows, and n8n to integrate with Gmail, Slack, and CRM APIs. Backend was developed with FastAPI for handling requests and logging conversations.

Technologies: LangChain, LangGraph, n8n, FastAPI, REST APIs

Automated Research & Report Generator

Created a tool that gathers information from the web, summarizes it into structured reports, and emails results to clients. The workflow used LangChain agents to fetch and summarize data, LangGraph to control multi-step tasks, and n8n for scheduling and automation. Backend services handled user authentication and report storage. **Technologies:** LangChain, LangGraph, n8n, Django, Node.js, OpenAI API, MongoDB

Pose Detection & Activity Classification System

Built a computer-vision system using Google ADK and MediaPipe to detect human poses, extract keypoints, and classify basic activities. Implemented pose-based embeddings for comparison, automated frame processing, and accuracy evaluation.

Technologies: Google ADK, MediaPipe, Python, OpenCV, FastAPI, TensorFlow/PyTorch

Certifications

Amazon Web Services - AWS
Agentic & Generative AI Development Using Langchain/LanGraph
Version Control Git & GitHub

Introduction to Docker & Kubernetes

Intro to Machine Learning Pandas, Numpy, Pydantic, ScikitLearn
Master JavaScript & Python in 100 Days

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