IMAD UD DIN

AI ENGINEER & DEVELOPER
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PROFESSIONAL SUMMARY

AspiringAIEngineer with hands-on experience in **Machine Learning**, **Deep Learning** (ANNs, CNNs, RNNs), and **Generative AI**. Skilled in model optimization, feature engineering, and hyperparameter tuning to improve model performance. Familiar with building GenAI pipelines using LangChain, LLMs, and vector databases for Retrieval-Augmented Generation (RAG) applications.And developing basic AI agents with tool integration.

TECHNICAL SKILLS

Languages & Tools

- Python
- Pandas
- NumPy
- Scikit-learn
- Matplotlib
- Keras
- PyTorch
- Tensorflow
- Langchain
- LangGraph
- MCP
- Flask / FastAPI

Techniques & Methods

- Supervised Learning
- Unsupervised Learning
- Feature Engineering
- PCA
- Transformer Models
- Data Augmentation
- Advanced Neural Network Architectures
- Advanced CNNs & RNNs
- MCP for AI Agents
- RAG

Other Skills worth Mentioning

- Data Visualization

WORK HISTORY

AI ENGINEERING INTERN 04/2025 to 06/2025
ATS, United States, (Remote)

- Optimized machine learning models using hyperparameter tuning, reducing training time and improving accuracy.
- Enhanced machine learning model accuracy by implementing advanced algorithms and feature engineering techniques.
- Applied dimensionality reduction techniques like **(Principle Component Analysis**) to optimize feature selection and improve model generalization capabilities.
- Conducted extensive hyperparameter tuning (**layers, neurons, activations, learning rates**) to optimize **ANN** performance for both regression and classification problems.
- Utilized pre-trained **CNN** architectures (**ResNet,DenseNet, EfficientNet,YoloV9**) via transfer learning to accelerate model development and boost performance on limited datasets.
- Applied advanced **data augmentation** techniques (**rotation, flipping, brightness adjustment, noise injection**) to improve model robustness and prevent overfitting.
- Implemented advanced **RNN** variants such as **LSTM** and **GRU** to capture long-term dependencies and reduce vanishing gradient issues.

AI ENGINEERING INTERN07/2024 to 09/2024
Comrex pvt ltd,Islamabad

- Built basic Retrieval-Augmented Generation (**RAG**) pipelines using **LangChain** to improve response quality by integrating external knowledge sources.
- Developed **multi-step reasoning workflows** using **LangChain** chains and agents for complex question-answering and task automation.
- Built and experimented with **Agentic AI** systems, enabling **LLMs** to interact with external tools, **APIs,** and perform autonomous decision-making steps.
- Applied advanced **prompt engineering** and **prompt tuning** techniques to enhance contextual understanding and reduce hallucinations in LLM outputs.
- Integrated **Generative AI** solutions into practical applications such as chatbots, **Q&A** systems, and knowledge-based assistants.
- Created reusable and well-structured AI components to support scalable and maintainable application development.
- Explored and tested different **AI** tools and frameworks to understand how generative AI systems work in real-world applications.

AI INTERN08/2023 to 10/2023
Ministry of IT & Telecom, islamabad

- Conducted **data preprocessing** and exploratory data analysis (**EDA**)on structured datasets to extract meaningful insights
- Developed **data visualizations** using Python to identify trends, patterns, and key metrics
- Applied foundational machine learning techniques for basic prediction and classification tasks
- Leveraged **Pandas**, **NumPy**, and **Matplotlib** for efficient **data manipulation**, analysis, and
- visualization
- Gained practical exposure to government IT infrastructure and digital service platforms
- Contributed to research on AI applications, digital transformation, and telecom systems

PROJECTS

- **SPINE DISEASE DETECTION SYSTEM USING X-RAY IMAGES**

  Tools & Concepts:
  - PyTorch
  - YoloV9
  - Transfer Learning
  - OpenCV
  - Pydicom
  - Pandas
  - Scikit-Learn
  - Deep Learning (CNNs)
  - Grad-CAM++
  - Data Augmentation

- **VACCINE COMBO PREDICTION FOR CHICKS. POULTRY** (Machine Learning)

  Tools & Concepts:
  - Machine Learning
  - Ensambles
  - Imputation using Model
  - Target Encoding
  - PCA

- **VOICE BASED PERSONAL ASSISSTANT** (AGENTIC-AI)

  Tools & Concepts:
  - LangChain
  - Whisper
  - Tools & LLM

EDUCATION

Bachelor in Computer Science
10/2022 - 06/2026
Pak-Austria Institute of Applied Sciences, Haripur, Khyber Pakhtunkhwa, Pakistan