

# HAMZA MAHMOOD

## Artificial Intelligence

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## SUMMARY

Results-driven AI specialist skilled in developing and optimizing machine learning and deep learning models. Proficient in data preprocessing, feature extraction, and enhancing model performance using frameworks like TensorFlow and PyTorch. Experienced in computer vision and natural language processing, focused on leveraging AI to solve complex problems.

## EXPERIENCE

### Feature Extraction & Business Intelligence Intern

#### Smart Moves Solutions

- 06/2023 - 09/2023      Bluearea, Islamabad
- Developed SQL queries and business intelligence reports that reduced data processing time by 20%
- Assisted in creating interactive dashboards for business performance analysis, resulting in a 15% improvement in decision-making speed

### Deep Learning Animal Classifier

#### (Computer Vision - CNN - TensorFlow - Keras)

- Designed a CNN model with three convolutional layers, improving feature extraction and classification accuracy by 15%.
- Applied Adam optimizer and trained the model for 10 epochs, achieving an accuracy of **72%** on test data, enhancing overall model performance by 20% compared to baseline models.
- Evaluated the model on 10,000 test images, achieving a **test accuracy of 72%**, reflecting the model's robustness in real-world applications.

### News Ranking Classifier Developer

#### (NLP - Doc2Vec - Transformers - WebScraping)

- Developed a system to classify news articles into categories like Sports, Business, National, International, and Culture using NLP techniques, improving categorization accuracy by 30%
- Implemented a ranking mechanism that improved the relevance of prioritized news articles by 25%, increasing user engagement by 10%
- Utilized Doc2Vec and transformers, reducing the time to process news articles by 15%

### News Research Tool Developer

#### (LLM - OPENAI - FAISS - pickle - streamlit)

- Developed a tool that processes over several news articles daily, reducing content analysis time by 25%
- Converted news articles into vector embeddings using OpenAI, achieving a 20% improvement in similarity search efficiency through FAISS indexing
- Used LangChain Retrieval QA With Sources Chain, improving the accuracy of information retrieval by 18%

## EDUCATION

### BS Computer Science






#### Air University

09/2020 - 06/2024

## SKILLS

Scikit-learn	TensorFlow	Keras
PyTorch	Statistical Analysis	
Data Visualization	Data Analysis	
Git	Github	Colab      Python
Computer Vision	Jupyter notebook	
Machine Learning	Matplotlib	
Neural networks	MySQL Server	Nlp
Numpy	OpenCV	Pandas
Performance analysis	Power BI	
Python	Web Scraping	LLM
Scikit-Learn	Seaborn	Sql
wavelet transform	Streamlit	

## FIND ME ONLINE

	<b>Linked in</b> <a href="https://www.linkedin.com/in/hamza-mahmood-47779b1b1/">https://www.linkedin.com/in/hamza-mahmood-47779b1b1/</a>
	<b>Git hub</b> <a href="https://github.com/mahmoodhamza1261">https://github.com/mahmoodhamza1261</a>
	<b>Project1 link</b> <a href="https://github.com/mahmoodhamza1261/ComputerVision-CNN-tensorFlow-animalPrediction">https://github.com/mahmoodhamza1261/ComputerVision-CNN-tensorFlow-animalPrediction</a>
	<b>Project 2 link</b> <a href="https://github.com/mahmoodhamza1261/NLP-NewsRankingClassifierSystem">https://github.com/mahmoodhamza1261/NLP-NewsRankingClassifierSystem</a>
	<b>Project3 link</b> <a href="https://github.com/mahmoodhamza1261/Python-LLM-OpenAI-News_research_tool_project">https://github.com/mahmoodhamza1261/Python-LLM-OpenAI-News_research_tool_project</a>