

Jashia Mitayeegiri

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Education

UNIVERSITY OF NORTH TEXAS, DENTON, TEXAS, USA

Engineering Masters in Artificial Intelligence (Machine Learning Concentration)

EXPECTED May 2024

GPA: 4 / 4

Courses: Machine Learning, Deep Learning, Natural Language Processing, Feature Engineering, Big Data, Generative AI, Prompt Engineering, LLMs.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD, INDIA

Master of Technology in Computer Science

AUG 2022

GPA: 9.40 / 10.0

Courses: Soft Computing, Web mining, Data Analytics, Data Science, High Performance Computing, Mobile Application Development.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD, INDIA

Bachelor of Technology in Computer Science

AUG 2021

GPA: 8.22 / 10.0

Courses: Data Warehousing and Data Mining, Grid and Cloud Computing, Pattern Recognition, Design & Analysis of Algorithms

Skills

PROGRAMMING LANGUAGES: Python, Java, C, C++, MATLAB, SQL, Json,

BIG DATA PROCESSING: Apache Kafka, Apache spark, Hadoop, mongoDB, zookeeper, Azure, AWS, GCP, MySQL.

WEB TECHNOLOGIES: HTML, Servlets, JSP, CSS, XML, Json, JavaScript, Django, Streamlit.

LIBRARIES: NLTK, TensorFlow, PyTorch, PySpark, LangChain, Hugging Face, SciPy, SpaCy, Matplotlib, LangSmith.

CONTAINER ORCHESTRATION / VERSION CONTROLS: Docker, Kubernetes, Git.

Academic Projects

REAL TIME YOUTUBE DATA ANALYTICS USING APACHE KAFKA STREAMS

- Used Kafka streams and zookeeper to get the videos data using YouTube API by initiating the Kafka producer and the sink to be mongoDB for downstream consumption and identified the top 10 videos categories with highest uploaded videos using PySpark.
- Within a window of 60 minutes the topics with the highest uploaded videos, likes and views are analyzed and plotted using the Kafka consumer stream.

Research Companion using Gemini Pro and SERP API:

- Empowering students and researchers to effortlessly upload research papers and generate vectors using FAISS. Created a user-friendly interface using the Streamlit library, enabling users to interact with the LLM and ask questions directly from PDF.
- Implemented an advanced response comparison system using BERT that leverages both the RAG (Retrieval-Augmented Generation) model and SERP data to provide highly relevant responses to user queries. Applied innovative techniques, such as LangChain agents for SERP API integration, prompt compression for improved efficiency, and LangChain memory concept to maintain contextual understanding of user interactions.

IMAGE CAPTION GENERATOR AND COMPARATOR USING RNN AND WORD2VEC:

- Engineered a merger model architecture to generate captions using Inception-v3 model for image feature extraction and LSTM for latent pattern extraction in image descriptions, employing word2vec for caption vectorization and image similarity measurement.
- Attained outstanding results with a BLEU-1 score of 0.91, BLEU-2 score of 0.85, and an average similarity score of 0.87, showcasing proficient development of image captioning and similarity analysis techniques.

OPTIMIZATION OF RIDE SHARING APPLICATION WITH REINFORCEMENT LEARNING:

- Designed and implemented a **Markov Decision model** using **Value Iteration Technique** to optimize ride paths, resulting in efficient and optimal decision-making. Utilized data visualization to illustrate the optimal policy for each ride episode, effectively maximizing rewards with a discount factor of 0.8.

Internships

MACHINE LEARNING INTERN – PREDICTIVE DATA SOLUTIONS

AUG 2021 – JAN 2022

Worked on producing a software facilitating decisive business decisions by quantifying topic similarities and dependencies using NMF topic modeling, **Word Embedding**, **Sentence Transformers**, **DBSCAN**, and **tSNE** during internship at Predictive Data Solutions.

NLP INTERN - INDIAN SPACE RESEARCH ORGANIZATION (ISRO) , INDIA

MAY 2021 – JULY 2021

Under **MoU between Indian Space Research Organization and NERTU-OU for the 'Speech Technologies for Humanoid' Project**

Developed 3 types of chatbots which are based on context, TF-IDF, Word2Vec. Word2vec chatbot with a **94% accuracy** and accelerated response time from **0.10 sec to 0.04 sec**. Revitalized it with entity and intent extraction, abbreviations detection, phrase collection.

INTERN – WOMEN SAFETY WING, TELANGANA STATE POLICE

OCT 2021 – NOV 2021

Contributed to report writing and analysis while conducting research on state-of-the-art computer vision models for the Missing Person Monitoring Cell. Explored models to aid in solving crimes pertaining to women and children.

Publications and Articles

- Mitayeegiri Jashia. Machine Learning Based Transfer Learning for Recognizing Face in Disguise. Design Engineering, 6 Jan. 2022., p. 13684 – 13693.
- Article on Latent Semantic Analysis (www.geeksforgeeks.org/latent-semantic-analysis/)

Extracurricular Activities

IEEE JNTUHCCH STUDENT BRANCH CHAIR (JUNE 2021- JUNE 2022)

Implemented engagement strategies leading to a **20% increase in membership** participation and successfully organized an industry collaboration event fostering networking opportunities for engineering professionals and students.