Lokesh Madem

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SUMMARY

As a passionate and performance-driven data engineer, I am eager to join Armely and contribute to the design, implementation, evaluation, testing, and maintenance of robust data solutions. With extensive hands-on experience in AI projects during both my bachelor's and master's degrees, I am currently advancing my expertise as a master's student. I possess strong skills in SQL Server, Snowflake, MySQL, Azure, AWS, Power BI, Tableau, and Spotfire, which will enable me to make a significant impact in this role.

EDUCATION

University of North Texas — **Denton, Texas, USA**
Masters in Artificial Intelligence — *Aug 2022 - May 2024*
Andhra University — **Vizag, Andhra Pradesh, India**
Bachelor of Technology in Computer Science — *July 2018 - May 2022*

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, PHP, JavaScript, TypeScript, HTML, CSS
AI Frameworks and Libraries: PyTorch, OpenCV, NLTK, Tensor Flow, Scikit Learn, Numpy, Pandas, Mediapipe, NetworkX
Data and Cloud: AWS, Apache Spark, ETL, DataBricks, Delta Lake, SQL, Tableau, PowerBI, Matplotlib, Seaborn, Altair
Artificial Intelligence: Machine Learning, Deep Learning, Feature Engineering, Big Data and Data Science
Web Frameworks and Technologies: Flask, NextJS, REST
DevOps: Docker, Postman, Git, Amazon ECS

OPEN SOURCE PROJECTS

Language Translator

- `Transformer | PyTorch | Natural Language Processing | AWS | RESTful API`
- Engineered an advanced translation system using state of the art transformer architecture, a revolutionary deep learning methodology for machine translation showcasing the ability to use Transformers architecture.
- Deployed this model on a user friendly website (waisum.co) utilizing RESTful API by leveraging Docker containers on AWS EC2. GitHub

wAIsum

- `Next.js | HTML | CSS | AWS Amplify`
- Designed a responsive and interactive website using Next.js to showcase project experiments and blog content.
- Leveraged AWS Amplify for seamless deployment and scaling, ensuring optimal performance. waisum.co

ACADEMIC PROJECTS

Automatic Image Captioner

- `Computer Vision | Natural Language Processing | TensorFlow | NLTK | CNN | LSTM`
- Developed a functional and creative image captioning system using convolutional neural network (CNN) and long short term memory (LSTM) algorithms for image analysis and caption generation.
- Achieved a high BLEU score (0.663) showcasing proficiency in image captioning methodologies using CNN and LSTM, demonstrating the system's effectiveness in bridging the gap between visual content and natural language understanding. GitHub

Tracking Tweet Sentiment at Scale Using a Pretrained Transformer

- `Spark Streaming | Delta Lake | MLflow | Hugging Face Transformers | Databricks`
- Developed a tweet sentiment analysis system using Spark Streaming for real-time data ingestion, Delta Lake for scalable storage, and a Hugging Face Sentiment Transformer for sentiment classification.
- Implemented a medallion architecture (Bronze, Silver, Gold) for structured data processing, achieving high sentiment classification accuracy and providing actionable insights into tweet sentiment. GitHub

Automatic Gym Trainer

- `Computer Vision | MediaPipe | Flask | HTML | CSS | KMeans Clustering | Pattern Recognition`
- Developed a solid code for an exercise recognition system, demonstrating excellent proficiency in problem solving and adhering to best practices in software engineering and building robust solutions.
- Used MediaPipe for real-time key point extraction & KMeans clustering to identify exercise patterns. Achieved high accuracy in recognition and counting, ensuring system reliability. Integrated Flask for a user friendly web interface (HTML/CSS) and API access, making the system easily accessible. GitHub

Heart Disease Prediction

- `Flask | Random Forest | SQL | HTML | CSS`
- Built a high accuracy heart disease predictor using Random Forest Classifier with a proven 90.16 percent accuracy, meeting the required performance standards. Used Random Forest to effectively analyze big data for accurate and robust predictions. Applied analytical skills to optimize model performance.
- Leveraged an SQL database for efficient data management and API development, enabling seamless model integration within the user-friendly Flask web application for real-time predictions. GitHub

CERTIFICATIONS

- Neural Networks and Deep Learning - Coursera
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization - Coursera
- Python For Everybody Specialization (University of Michigan) - Coursera