MANISH VIKRAMA

9810 Zelzah ave, Northridge, CA 91325

📞 747-836-7513   ✉ Gmail   in Linkedin   ⭘ Github

Education

California State University Northridge	**August 2023 – Present**
Master of Science in Computer Science	*4.0 G.P.A*

Research

Fake news on social media

- Conducting research on detecting fake news on social media using Graph neural network (HeteroSgt) for analyzing complex data relationships, GAMC for multimodal data fusion, and an Unseen Event Predictor for identifying novel fake news events.

Technical Skills

Programming Languages : Python, JavaScript, DSA (Data Structures and Algorithms), Design Patterns
Machine Learning and AI: Scikit-learn, TensorFlow, Keras, PyTorch
Deep Learning : **Generative Modeling, Computer Vision, Graph neural networks, knowledge Graphs**
Natural Language Processing (NLP/ NLU) : **BERT, GPT, NLTK, LLM (Large Language Models)**
Frameworks/Libraries: React JS (Front-end), ExpressJS (Back-end), Node.js (Full stack/MERN), MongoDB, SQL
Web Development Tools:HTML5/CSS, Figma (Prototypes, Web Design), Visual Studio Code
Data Analysis and Visualization: NumPy, Pandas, Plotly, Matplotlib, Data science, Data analyst

Experience

Tata Consultancy services - Software Engineer	**November 2020 – June 2023**
Aspen Publishing Front End Developer (UI/UX)	*April 2022 – June 2023, Hyderabad*

- Engineered offline functionality for casebookconnect.com using Service Workers and the Cache API, enhancing user experience.
- Developed scalable backend microservices with Node.js, Express.js, TypeScript, and MongoDB, optimizing provider matchmaking and customer satisfaction.
- Implemented a standardized caching strategy with Service Workers to manage offline resources, improving browser cache efficiency.
- Automated microservices deployment through CI/CD pipelines using Jenkins, Jira, and GitLab, boosting deployment efficiency by 84
- Predicted provider availability during festive seasons, reducing no-shows by 85 and improving customer service

Projects

GPT Model Development   **May 2024**

- Built a Generatively Pretrained Transformer (GPT) model based on "Attention is All You Need" and OpenAI's GPT-2/GPT-3, focusing on decoder architecture and built a tokenizer to encode text using Byte pair encoding algorithm to feed the language model.
- Self-Attention Mechanism: Implemented self-attention mechanism with positional encoding and softmax integration.
- Transformer Architecture: Developed transformer architecture with multi-headed self-attention, feedforward layers, residual connections, and dropout for regularization.
- Code Repository: **Chat-GPT**

Music generation with RNN(LSTM)   **March 2024**

- Engineered a music generation model using LSTM networks with an Irish song dataset, learning sequential patterns to compose new melodies.
- Applied LSTM for text generation tasks, establishing groundwork for LLM models and text-to-image/video generation
- Proficiency in (**RNNs**) and (LSTMs) for sequence modeling and training LSTM models to compute loss functions, and optimize the model for better performance.
- Code Repository:**Music Generation with RNN-LSTM**

Debiasing Facial Detection System using DB-VAE   **April 2024**

- Engineered a facial detection model with a Debiasing Variational Autoencoder (DB-VAE) to mitigate biases in training data.
- Investigated bias in facial detection systems arising from imbalanced training data.
- Implemented a Debiasing VAE to learn a latent representation of faces, mitigating potential bias and uncertainty based on skin tone.
- Trained and evaluated the DB-VAE model to achieve fairer facial detection performance.