TEJAS JADHAV

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PROJECTS

Airline Customer Support RAG Chatbot *[GitHub]*
- Developed an end-to-end airline support system with a web interface using RAG, LangChain, and agentic workflows.
- GPT-4o powered chatbot handles flight updates, hotel & car bookings, and trip recommendations with real-time tool integrations.

LLMOps Pipeline for Fine-Tuning and Service Continuity in LLM Outages *[GitHub]*
- Designed and implemented an LLMOps pipeline to fine-tune small-size LLMs as a contingency for service LLM outages.
- Leveraged GPT-4o, Claude 3 Sonnet, and Gemini 1.5 Flash for data synthesis and response evaluation, while fine-tuning small models such as Gemma 2B, 7B, Mistral 7B 0.3, and LLaMA3 8B.

Metaphor Identification through Bi-Directional LSTM and BERT Embeddings *[GitHub]*
- Crafted a Bi-Directional LSTM model with attention mechanisms, integrating BERT embeddings to classify metaphoric expressions, with 91% accuracy.
- Collaborated with peers to improve model performance, ranking in the top 5 of the class for metaphor detection.

Predicting Patient Mortality Risk: Bayesian Neural Networks *[GitHub]*
- Applied Bayesian Neural Networks to 46,520 ICU patient records, increasing uncertainty detection by 230% for out-of-domain cases and resolving issues related to uncertainty.
- Utilized Bayes by Backdrop, yielding 10.4% higher AUPR-SUCC, and 8.4% lower AUPR-ERR, strategically improved trustworthiness in out-of-domain scenarios.

EXPERIENCE

Purdue University
Graduate Assistant *Jan 2024 – May 2024*
- Designed and implemented an LLMOps pipeline to fine-tune small-scale language models, providing a strategic contingency solution for service LLM outages.
- Leveraged cutting-edge models (GPT-4o, Claude 3 Sonnet, Gemini 1.5 Flash) for data synthesis and evaluation, while fine-tuning smaller models such as Gemma 2B, Mistral 7B 0.3, and LLaMA3 8B.

Indiana University
Research Assistant *Aug 2024 – May 2025*
- Built an AI framework using BERT, RoBERTa, and fine-tuned adapters for dementia detection from chat transcripts, with 90.4% accuracy.
- Implemented explainable AI techniques with Language Interpretability Tool EMNLP ‘20, Delivered interpretable predictions, enhancing clinical trust for early dementia screening.

EDUCATION

Purdue University
M.S. Computational Data Science *Aug 2023 – May 2025*
- Relevant Coursework: Applied Regression, Time Series Analysis, Statistical Machine Learning, Statistical Computing.

University of Pune
B.S. Computer Science *Aug 2018 – Aug 2022*
- Coursework Highlights: Linear Algebra, Artificial Intelligence, Data Structures and Algorithms.

SKILLS

Languages & Frameworks: Python, R, SQL, SAS, Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, TensorFlow, PyTorch, Tableau PyTorch, TensorFlow, Keras, Sklearn, Pandas, Numpy, Statistics, Statistical modeling, Mathematics, Natural Language Processing, Matplotlib, Seaborn, Tableau, Power-BI, Github/Git, Azure, AWS.

Certifications: Improving Deep Neural Networks, Convolutional Neural Network, Sequence Models, Structuring Machine Learning Projects by DeepLearning.ai