ANJALI SINGH

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EDUCATION

University of Southern California

Master of Science (M.S.)

Los Angeles, CA, US

August 2023-May 2025

Relevant Coursework: CS 544: NLP, CS 567: ML, CS 571: Web Tech, CS 570: Algorithms

Manipal Institute of Technology Bachelor of Technology (BTech)

Manipal, India

July 2018-July 2022

Relevant Coursework: Data Structures and Algorithms, Database Management Systems, Data Warehousing and Data Mining, Neural Networks and Fuzzy Logics, Big Data Specialization, Human Computer Interaction

SKILLS

- Programming Languages: Python, Java, C++, SQL
- Programming Frameworks: PyTorch, NLTK, Git, AWS, SpringBoot, Django, Android Studio, React, CI/CD Pipelines

PROFESSIONAL EXPERIENCE

Goldman Sachs

Engineering Analyst

Bengaluru, India

August 2022-June 2023

- Pioneered a robust volume testing framework with Gatling, Java, and React
- Created the Deal Management Website front-end module using React for improved user interaction
- Orchestrated migration of on-premise services to AWS, optimizing system performance
- Prepared unit tests, integration tests and end-to-end tests with a code coverage of 92%

Goldman Sachs

Bengaluru, India

June 2021-July 2021

- **Summer Intern** Collaborated on demising of legacy applications, contributing to modernizing systems and boosting operational efficiency by creating new systems using Django and Appian
- Developed the front-end and back-end of a new webpage for entering appraisal data of commercial properties within loans

IRM

Bengaluru, India

Global Remote Mentorship Intern

August 2020-May 2021

- Explored various challenges of explaining Graph Neural Networks (GNNs) compared to tabular models using Entity Matching, aiming to bridge the gap in explainability techniques
- Proposed improvements for GNN explanations, addressing feature importance, node-level insights, and contextual edge relevance

PUBLICATIONS

Reimagining GNN Explanations with Tabular Data Insights @ ICML 2021 Workshop on Theoretic Foundation, Criticism, and Application Trend of Explainable AI

PROJECTS

Chord Based Generation of Various Music Models vs LSTMs

September 2023-December 2023

- Engineered diverse AI models, including autoencoders, N-grams, GANs, and diffusion models, to create complex jazz music
- Executed comparative analyses against LSTMs, enhancing autoencoder and N-gram models for improved musical complexity
- Developed metrics using Muspy and music21 for analyzing music generated by machine learning models

Mitigating Bias in Indic Language Models

January 2022-April 2022

- Led a project focused on addressing bias in GPT-2 language models for the Hindi language
- Trained GPT-2 models on Indian texts and leveraged Domain Adaptive Pretraining techniques to mitigate bias, contributing to improved fairness and accuracy by utilizing RNNs and LSTMs to understand and address evolving biases within the models
- Conducted a comprehensive analysis involving native speakers to assess the effectiveness of bias mitigation

Patient Scheduling Algorithm

March 2020-June 2020

- Implemented an innovative scheduling algorithm for an Emergency Department based on "A Genetic Algorithm for Solving Patient-Priority-Based Elective Surgery Scheduling Problem" by Yu Wang et. al
- Explored applications of Genetic Algorithms in real-life applications and improvised the algorithm to enhance its efficiency and effectiveness