DIVIJ GERA

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Computer Science graduate, with hands-on experience using core AI building blocks across applied AI and machine learning projects in healthcare, NLP, and music generation. Skilled in GenAI, LLMs, deep learning, and prompt engineering, with a track record of delivering high-impact models from research to real-world deployment. Actively seeking internship / job opportunities to continue learning and help push the innovation boundaries of intelligent systems.

EDUCATION

University of Southern California

Master of Science, Computer Science (GPA: 4.0)

Los Angeles, California August 2024-Present

Delhi Technological University

Delhi, India

Bachelor of Technology, Software Engineering (CGPA: 9.09/10)

August 2019-May 2023

EXPERIENCE

NatWest Group, Software Engineer

July 2023-July 2024

- Developed and implemented strategy to migrate organization's entire codebase (70K+ projects) from on-prem to the cloud (AWS) to protect against data loss
- Designed and developed pipelines to detect changes and modify code visibility to help establish open-source code culture
- Performed data analytics on GitLab platform CI/CD runners implemented across the organization to ensure CI/CD health and improve team productivity

Get Me Therapy, Product Manager

July 2022-July 2023

- Executed end-to-end development of the AI enhanced mental health programs, driving 15% revenue growth
- Developed several automation processes to reduce operational load and increase productivity
- Spearheaded design and development of the application MVP (min-viable-product)

NatWest Group, Data Analytics Intern

June 2022-August 2022

- Constructed data mappings and workflows to migrate historic and current load processes to new tooling
- Retrieved and rewrote Relational Database scripts in accordance with the new Snowflake tool for load process migration

Favcy Venture Builders, Intern

August 2021-February 2022

- Collaborated on management of the Openbook VC project, coordinating between the various teams involved
- Compiled Lifetime Value and Customer Acquisition Cost valuations for up-and-coming startups
- Produced UX templates for startup clients according to their respective business statements

ACADEMIC PROJECTS

Retinal Fundus Image Analysis for Cardiovascular Disease Risk Prediction – University of Southern California (Ongoing)

- Built Al-powered classification models to identify cardiovascular disease risk
- Utilized Machine Learning (ML), Deep Learning, LLMs, and GenAl to enhance predictive accuracy
- Collaborated with PhD candidates under Prof. Anita Penkova at USC to apply agentic AI techniques in biomedical imaging

Music Genre Transfer Using Deep Generative Architectures

- Prototyped a music genre transformation pipeline using Transformer, CycleGAN, VAE, StarGAN, and MusicGen on real-audio (GTZAN dataset), evaluating each model's ability to preserve melody and rhythm while adapting musical style.
- Adapted MusicGen LLM for audio-to-audio genre transfer via prompt conditioning, enabling real-time creative remixing through a web interface; demonstrated strong alignment between generated outputs and target genre features.

Bias Detection and Mitigation in Clinical Large Language Models

- Built a bias detection framework using ClinicalBERT and BioGPT on MIMIC-III EHR data, evaluating fairness across race, gender, religion, and marital status using metrics like Demographic Parity and Equalized Odds.
- Applied fairness mitigation techniques that cut Mean Prediction Disparity by 50%+ without impacting model accuracy.

POSITIONS OF RESPONSIBILITY

Pratibimb - The Dramatics Society of Delhi Technological University, Head of Production / Head of Finance

- Organized and worked on team management as well as a scriptwriter and actor in an award-winning annual production, recognized across India's toughest college competitions
- Managed public relations and finances for the society
- Secured annual college funding of Rs. 250,000 for the society

SKILLS

AI & ML: Gen AI | LLMs | AI Engineering | Agentic AI | Data Science | ML | Deep Learning | Prompt Engineering | NLP | Computer Vision | Information Retrieval

Development: Python | C | C++ | MySQL | GitHub | VSCode | Jupyter | Google Colab

Software & DevOps: CI/CD | DevSecOps | Kubernetes | GitLab | AWS | Informatica | Snowflake

Tools & Libraries: Scikit-learn | TensorFlow | PyTorch | Hugging Face | OpenAI API | Cursor | Github Copilot