RADHA PARIKH

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EDUCATION

CARNEGIE MELLON UNIVERSITY, HEINZ COLLEGE — Pittsburgh, PA
Master of Information Systems Management | GPA: 3.73 — August 2024 - August 2025
Intro to Deep Learning, AI Venture Studio, Intro to Machine Learning, Distributed Systems, Operationalizing AI, Agent Based Modelling

MANIPAL INSTITUTE OF TECHNOLOGY — Manipal, India
Bachelor of Technology - Aeronautical Engineering, Minor in Data Science | GPA: 3.62 — August 2017 - August 2021

PROFESSIONAL EXPERIENCE

FRACTAL ANALYTICS — Bengaluru, India
Data Engineer — August 2021 -June 2024

- Spearheaded the implementation of MLOps practices for a transportation analytics project using Azure, maintaining the model accuracy at ~74% for the track and trace application for a multinational CPG corporation
- Designed low latency and high throughput ADF pipelines for automating data ingestion into the PowerBI dashboards for multinational retail corporation processing upto ~100 GB data in less than 15 minutes
- Built ETL pipelines to ingest data from disparate sources for a webapp with 500 daily active users and optimized throughput for existing cosmosDB containers, reducing cost by ~$1000/month
- Improved the accuracy of an existing model predicting cashflows by 70% for top 52 vendors and customers by augmenting existing data with more fields from the SAP-ERP system using ARIMA and SARIMAX
- Optimized the CI/CD pipeline of an MMM product by writing unit tests using Tensorflow for statistics in the simulation model

HOMEWORK APP — Bengaluru, India
PM Intern — March 2021 - June 2021

- Leveraged Mixpanel for executing 50+ user interviews for user research and product usability analysis
- Designed 3 features to enhance UX for recurring users by reducing friction in user flow; resulted in 50% increase in downloads
- Conducted E2E product testing for the weekly releases and collaborated with dev team on bug fixes

SKILLS & CERTIFICATIONS

Machine Learning Tools:	NumPy, Pandas, PyTorch, TensorFlow, Scikit-learn
Machine Learning Techniques:	Neural Networks, Transformers, RNNs/LSTMs, CNNs, PPO, LangChain
Programming Languages & Databases:	SQL, Python, Java, R, MongoDB, MySQL, cosmosDB
Data Processing and Monitoring:	Azure, Spark, Databricks, Kafka, Docker, Kubernetes, CI/CD, MLflow, WandB, Git, PowerBI

PROJECTS

Cuddle Code - https://cuddle-code.com/ | Demo

- Led ideation, market research, user interviews, and prototype development to validate product-market fit
- Designed and developed the official website to communicate the mission and onboard early partners
- Explored partnership opportunities with hiring platforms, bootcamps, and recruiters to pilot AI-augmented assessment experiences
- Developed frameworks for assessing human-AI teaming skills to better identify candidates fit for AI-driven workplaces

Reinforcement Learning-based Neural Architecture Search for DeepFake Voice Detection

- Designed a hybrid NAS framework combining DARTS and PPO to efficiently search for deepfake voice detection architectures
- Applied Proximal Policy Optimization for exploration and DARTS for exploitation to balance search efficiency and performance
- Achieved improved detection accuracy on the ASVspoof 2019 dataset, advancing state-of-the-art in synthetic voice detection

Automatic Speech Recognition (ASR)

- Developed an Automatic Speech Recognition system leveraging Mel-Frequency Cepstral Coefficients for feature extraction
- Trained and evaluated models using CTC Loss with beam search decoding, improving phoneme-level sequence prediction
- Integrated attention mechanisms and a Transformer-based language model to enhance full utterance-level prediction accuracy

Real-Time Air Quality Prediction System

- Built a real-time air quality prediction system leveraging Kafka for high-throughput data streaming
- Designed a producer-consumer architecture simulating live AQI data ingestion using the UCI Air Quality dataset
- Implemented MLflow for experiment tracking and Docker Compose for scalable local deployment

LEADERSHIP & ACTIVITIES

- Tutoring mathematics to middle school children as a part of the PLUS program at HCI, CMU
- Organised skywatches and workshops, increasing astronomy education on campus as the president of Astronomy Club, introduced a podcast wing, directed 3 episodes and created a digital presence on **Spotify** and **Linkedin**
- Researched diffuser aerodynamics and presented **findings** at WESC 2019 in Ireland as part of the Renewable Energy Group