Rajasvi Vinayak Sharma

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EXPERIENCE

Signos
Apr 2023 – Present
Machine Learning Engineer
Remote, CA

- Designed deep learning model for post-meal glucose spike prediction, dual-purposed for exercise recommendations to effectively minimize post-meal glucose spikes by suggesting exercises to **>10,000 users** & help them lose weight.
- Built Retrieval Augmented Generation (RAG) pipelines using LangChain for feature extraction from **> 1M free text meal logs** to improve post-meal glucose spike prediction model accuracy.
- Achieved a **12%** boost in user meal logging engagement by creating an real-time anomaly detection algorithm for identifying point of interest events & rapid glucose level spikes.
- Developed a **meal recommendation engine** using a hybrid collaborative & content filtering model based on features from multiple signals like continuous glucose data, meal/exercise/sleep logs, to help >10K users make healthy food choices.

Nvidia
Jun 2022 – Sep 2022
Data Scientist Intern
Santa Clara, CA

- Developed and deployed an end-to-end Time-series Anomaly Detection tool using Z-Score thresholding and Kubeflow pipelines to alert about malicious activities in 1000+ categories across 10M+ gaming sessions, reducing the alert response time from a few months to just 1 week.
- Improved in-place A/B test analysis by creating tool to identify significant sub-population using causal inference ML models like S-Learner, T-Learner, Double ML methods etc.

Goldman Sachs
Jun 2018 – Aug 2021
Data Scientist, Analyst
Bengaluru, IN

- Fine-tuned BERT, RoBERTa, and DistilBERT Transformer models using Hugging Face to extract named contact-related entities from over 8 million emails per day, achieving an impressive 85.7% accuracy rate.
- Built XGBoost & LGBM based models for classifying jurisdiction violations among Bloomberg trader conversations (>6M daily) by leveraging semantic & temporal information extracted from the data as features, achieving an impressive 78% precision.

EDUCATION

University of California - San Diego | California, US
Sep 2021 – Mar 2023
M.S. in Electrical & Computer Engineering ***(Major: Machine Learning & Data Science)***
GPA: **3.91 / 4.0**

- **Coursework**: Recommender Systems & Web Mining, Deep Learning for Natural Language Understanding, Statistical Natural Language Processing (NLP), Big Data Mining & Spark Analytics, Statistical Machine Learning (ML), Linear Algebra

Indian Institute of Technology (Banaras Hindu University) Varanasi | India
Jul 2014 – May 2018
B.Tech. in Electronics Engineering
GPA: **8.81 / 10**

PROJECTS

Clickbait Spoiler Generation (SemEval'23 Shared task) [code] [report] | PyTorch, Hugging Face
Sep 2022 – Dec 2022

- Created a 2-stage process to generate Clickbait spoilers using text classification, question answering, and ranking models. Utilized DeBERTa, RoBERTa, and DistilBERT Transformer models, fine-tuning them to achieve optimal results. Evaluated the efficacy of the approach using metrics such as BLEU-4, exact match, and F-1 scores.
- Contributed to the Clickbait Challenge by surpassing the benchmark results through the implementation and enhancement of techniques outlined in the organizers' research paper, resulting in an outstanding 36.4 BLEU-4 score.

Neural Collaborative Filtering for Recommendation Systems [code] [report] | PyTorch
Jan 2022 – Apr 2022

- Built 3 Neural Collaborative Filtering models: Generalized Matrix Factorization (GMF), Multi-Layered Perceptron (MLP) & Neural Matrix Factorization (NeuMF) following architecture & key-metrics evaluation from original paper.
- Compared traditional recommendation algorithms like Matrix Factorization with state-of-art Neural collaborative filtering for Movie Recommendation task. Calculated nDCG and HR@10 scores to study the effect of latent hidden factors on performance.

SKILLS

Languages : Python, SQL, R

Methods/Technologies : Retrievel Augmented Generation (RAG), Large Language Models (LLMs), Natural Language Processing, Prompt Engineering, Indexing

Big Data : Apache Flink, PySpark, SparkSQL, Hadoop, Map Reduce, Kafka, Redis, Hbase, HDFS

Frameworks/Libraries : LangChain, LlamaIndex, VectorDBs(ChromaDB, Weaviate, Pinecone, Faiss), Tensorflow, PyTorch, Hugging Face, Pandas, Numpy, scikit-learn, CausalML, DoWhy

MLOps/Cloud/Dev Tools : Kubeflow, MLFlow, Databricks, Weights & Bias, Amazon Web Services (AWS), GCP, Streamlit