Tannishtha Mandal

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EDUCATION

Northeastern University — Boston, MA
Master of Science in Artificial Intelligence, CGPA 3.2/4.0 — *December 2023*
Relevant Coursework: Foundations of Artificial Intelligence, Algorithms, Machine Learning, Data Mining Techniques, Human-Computer Interaction.

Kalinga Institute of Industrial Technology, Bhubaneswar, Orissa — India
Bachelor of Engineering in Electronics and Telecommunication, CGPA 9/10 — *July 2021*
Relevant Coursework: Data Structure and Algorithms, Object Oriented Programming, Operating Systems.

TECHNICAL SKILLS

Languages: Python, SQL, C++, Matlab,Java.
Libraries: PyTorch, Pandas, TensorFlow, Scikit-learn, SpaCy, Gensim, NLTK, HuggingFace, XGBoost, Scipy, NumPy,ggplot2,ReactJS.
Cloud Technologies: AWS EC2, S3, Boto3.
Database and visualization: PostgreSQL, MySQL, Tableau, BigQuery, QuickSight, Matplotlib, Dashboard, Tensorboard
Deployment: Flask, Streamlit, Gitlab, Github,Heroku, Docker.
Machine Learning: Regression,Classification,Clustering,Random Forest, Decision Tree, Support Vector Machine, Web Scraping, Sentimental Analysis, Text Tagging.
Deep Learning: CNN,RNN, GNN, GAN, Transformers,DNN,FNN.

EXPERIENCE

High Radius Corporation — India
Full-Stack Development Intern
April 2020-June 2020

- Built an AI-Enabled Fintech B2B Cloud Application to predict the first payment made against a certain invoice
- Achieved 91.2% accuracy after implementing Decision Tree Algorithm using Scikit-learn for prediction.
- Delivered scalable UI for the same using JDBC, NLP, and ReactJS to make the application interactive.

PROJECTS

Content Embedding Based Movie Recommendation System with Sentiment Analysis
August 2021

- Advanced User experience by building a movie recommendation web engine and incorporating sentiment classification model on movie reviews.
- Enhanced the quality of recommendation by building a word embedding model on movie content and calculated cosine similarity scores.
- Attained F1 score of 0.97 on sentiment classification by implementing Naïve Bayes classifier and deployed engine on heroku served using Flask.

Biomedical Text Tagging using BioBert
September 2021

- Automated the use case of entity extraction by tagging genes and proteins in biomedical text data using the BioBert model in transformers.
- Attained 95% of validation accuracy after training a customized model. Launched backend the working model in streamlit.

Text Autocomplete
May 2022

- Built LSTM model to impute missing word in Billion word corpus achieved 85 % accuracy.
- Implemented various preprocessing techniques such as tokenization, lemmatization.
- Implemented pre-trained Glove Embedding which further improved accuracy to 94.35%.

Disaster Tweet Classification
May 2021

- Built BiLSTM and BERT Model to classify whether tweet is a disaster or not trend using Pytorch and HuggingFace.
- Achieved 91% of accuracy after implementing various pre-processing techniques such as lemmatization, tokenization.

H&M Product Recommendation System
August 2022

- Built product recommendation on H&M product data using item-item embeddings built using sentence transformer and TF-IDF vectorization.
- Improved results of recommendation after incorporating pre trained Glove embedding and clustering pipeline for faster recommendation.

RESEARCH AND PUBLICATIONS

A Comparative Study of AI-based Predictive Models for Cardiovascular Disease (CVD) Prevention in Next Generation Primary Healthcare

- Presented at the International Conference Viz. IEEE INCOCON 2020 held in Nov 2020 and **published in** IEEE Xplore.
- Developed the Intelligent Module to define a Primary Healthcare Service Platform responsible for predicting a risk score for a patient to intervene with medical assistance to improve the mortality rate.
- Analyzed performance of different AI/ANN techniques with different sets of attributes with accuracy scores ranging between 62.78% and 86.56%.