Meet Mukeshkumar Patel

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Summary

A budding data scientist with a solid foundation in Data Science, and web development and design, passionate about driving impactful insights through collaboration and continuous learning.

Education

Stevens Institute of Technology, New Jersey, US   **Exp Graduation- May 2024**
Master of Science in Data Science – Department of Mathematical Sciences   *GPA- 3.78/4*

NMIMS University, Mumbai, India   **August 2020**
Bachelor of Technology in Information Technology

Technical Skills

Languages: Python, SQL, JavaScript, HTML5, CSS3, R
Web Framework/Tools: Bootstrap, AngularJS, jQuery, Figma, NodeJS, FontAwesome
Data Science Tools: NumPy, Pandas, Sklearn, TensorFlow, Statsmodels, Matplotlib
Other: Tableau, PostgreSQL, MongoDB, SAS, Git, AWS

Projects

Stevens Institute of Technology   **New Jersey, US**
Drug Side Effect Assistance Chatbot   *December 2023*
- Developed a model trained on drug reviews to answer question based on side effects and public perception of drugs
- Scraped drug reviews through Selenium and used QDrant to generate knowledge base for our LLM model
- Utilized OpenAI's GPT 3.5 to fire prompts, and Retrieval Augmented Generation (RAG) to generate outputs based on data

Merck Datathon   *May 2023*
- Led a team of 3 to evaluate admission triaging processes at substance abuse facilities
- Wrangled data to conduct logistic regression and survival analysis for treatment success across vulnerable populations
- Communicated patterns across 5 US regions through visualizations to classify improvement areas in triaging processes

Statistical Analysis to Predict Loan Defaulters | (Code)   *April 2023*
- Analyzed Deloitte dataset using several statistical methods to predict loan defaulters with statsmodels and sciPy
- Executed over-sampling on imbalanced data using SMOTE and selected 10 features by applying Mutual Information
- Augmented and deployed Random Forest by hyperparameter tuning, resulting in a weighted average F1 score of 0.81

Bioactivity Prediction to identify drug discovery lead | (Code) (Demo)   *April 2023*
- Procured and curated single protein data from ChEMBL Database using RDKit and pandas for bioactivity prediction
- Implemented a supervised machine learning model yielding R-square of 0.68 and Mean Square Error of 0.55
- Deployed the model online via Streamlit, enabling seamless access and interaction with the predictive tool

Song Mood Suggestion based on Facial Expression   *December 2022*
- Conceptualized model for song suggestion based on 4 facial expressions – Happy, Angry, Calm, Sad
- Collected music data from SpotiPy and preprocessed 36000 images
- Collaborated to implement Multi-layer Perceptron (MLP) and VGG-16 architecture to classify songs and facial expressions with accuracies of 77.2% and 60.3% using Tensorflow and Sklearn

Work Experience

Stevens Institute of Technology   **New Jersey, US**
Graduate Teaching Assistant   *September 2023 - Present*
- Designed and implemented in-class activities with professors to improve engagement and learning outcomes
- Mentored 90 students to help better grasp topics discussed in class and graded assignments providing constructive feedback

Freelancing   **Surat, India**
Web Developer and Designer   *October 2020 - June 2022*
- Constructed ERP web application by pioneering AngularJS, crafting 42 pages of functionalities and design
- Leveraged Figma to showcase wireframe designs improving client communication and visual representation of concepts
- Redesigned packaging firm's website, leading to a remarkable 44% increase in user engagement enhancing user experience
- Conducted A/B testing on firm's landing page using Google Optimize, resulting in a significant 23% boost in conversion rate
- Developed over 12 high-quality Bootstrap templates for consumer services clients, ensuring consistent effectiveness