Venkata Sai Surya Rao Beeraka

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Education

University of Illinois at Chicago (UIC) | GPA: 3.6/4.0 August 2023 - May 2025
Master of Science in Computer Science
Relevant Coursework: Computer Algorithms, Computer Vision, Data Mining & Text Mining, Data Science, Database Systems, HCI

Jain University, Bangalore, India | GPA: 3.5/4.0 August 2017 - June 2021
Bachelor of Technology in Computer Science and Engineering specialized in Internet of Things
Relevant Coursework: Software Engineering, Data Visualization, Data Structures, Operating Systems, Computer Architecture, Machine Learning, Natural Language Processing, Embedded Systems, Object Oriented Programming

Skills

Programming Languages: Python | Java
Front-end and Back-end technologies: HTML| CSS | JavaScript | React | Angular | Pytorch | Node.js | Spring Boot | TensorFlow
Scripting: Linux Shell Scripting
Databases: MySQL | Oracle SQL
Tools and Technologies: CI/CD | Apache Kafka | Soap UI | Arduino IDE | Docker | ServiceNow | Bitbucket | SDLC

Professional Work Experience

Carelon Global Solutions, Bangalore India. September 2021 - July 2023
Software Engineer, Client: Elevance Health

- Spearheaded the **successful delivery of a new product streamlining broker onboarding processes** in the health industry. Achieved a remarkable **reduction in turnaround time from 14 days to just 1 business day** through strategic automation.
- Engineered **permanent solutions for Workday issues**, resulting in a significant **reduction of 45 hours per week in manual effort** and implemented robust **database objects (T-SQL, SSIS, stored procedures, functions, and jobs)** to ensure efficient and responsive data access.
- Collaborated with cross-functional partners to conduct in-depth **root cause analysis of production incidents**; findings were instrumental in **implementing preventive measures, reducing incident frequency by 35%**.
- Modernized and optimized **existing code bases**, incorporating enhancements to align with current development standards, thereby **improving overall system functionality**.
- Played a **key role in a multidisciplinary team**, providing valuable support in **data collection, processing, and collaborating with engineering and research staff**.
- Delivered a critical payment's impact list in adherence to business requirements within specified timeframes, showcasing a **commitment to timely and accurate project delivery**.

Relevant Projects

Comprehensive Analysis of EPL Match Data March 2024 – April 2024

- Cleaned and prepared football match datasets by encoding categorical variables, handling missing values, and creating new features, ensuring **optimal data quality for model training and analysis**.
- Implemented various **Machine Learning models** to predict match outcomes, achieving up to **67.46% accuracy**. Analyzed performance metrics and created visualizations, including **confusion matrices and ROC curves**, to guide model selection and optimization.

Sentiment Analysis of Political Tweets February 2024 – April 2024

- Conducted comprehensive sentiment analysis on tweets related to Barack Obama and Mitt Romney using **TF-IDF vectorization and Logistic Regression**. Achieved a highest accuracy of **61.68% with an Ensemble model**, effectively identifying sentiment trends in political discourse.
- Cleaned and prepared large **tweet datasets**, implemented machine learning models, and utilized visualization tools such as confusion matrices and ROC curves for model evaluation, demonstrating **strong data preprocessing and analytical skills**.

Drowsiness Detection System September 2023 – December 2023

- Spearheaded the development of a high-accuracy Drowsiness Detection System using **Convolutional Neural Networks, achieving an 86% accuracy rate**. Demonstrated expertise in cutting-edge machine learning techniques.
- Implemented **Haar Cascades classifiers** for real-time eye detection and optimized accuracy through focused region-of-interest analysis. Proficient in **computer vision methodologies** and directed data preprocessing efforts for robustness and reliability.

Additional Information

- Achieved AWS Fundamentals: Going Cloud-Native Certification, demonstrating proficiency in cloud computing fundamentals.
- Participated in Rakathon 2021 on HackerEarth, collaborating with a team showcasing problem-solving skills, teamwork, and adaptability.