Pavan Kumar Kokkiligadda

Portfolio-Page 469-207-6377 pavan0417.k@gmail.com linkedin.com/in/machaax

Education

Rutgers University-New Brunswick **January 2024 – Present**
Master of Science in Computer Science *New Brunswick, New Jersey*

Indian Institute of Technology, Kharagpur **August 2018 – May 2023**
B.Tech & M.Tech (Hons.) in Mining Engineering *Kharagpur, West Bengal*

Relevant Coursework

- Machine Learning
- Intro to AI
- Big Data Processing
- Database Systems
- Operating Systems
- Computer Networks
- Algorithms
- Probability and Statistics

Experience

Rutgers University-New Brunswick **August 2024 – Present**
Research Assistant *New Brunswick, New Jersey*

- Developed a multi-stage data analysis pipeline using **PySpark** to extract and identify geopolitical entities from thousands of news articles across 600+ domains, utilizing **spaCy** for entity recognition.
- Performed **topic modeling** and **sentiment analysis** classifying articles into 15+ topics using **BERT transformer**.
- Achieved 86% accuracy in identifying public sentiment trends, providing insights into community concerns.

Verzeo **May 2022 – June 2022**
Machine Learning Intern *Bangalore, Karnataka*

- Developed a **Theft prevention system** that alerts users of intrusion into their house/property using computer vision.
- The system distinguishes family members as safe and sends an email with captured images if an intruder is detected.
- Built **Sentiment Analysis** machine learning model using SVM and count vectorizer to classify restaurant reviews as positive or negative, achieving an accuracy of 80.2 %.

InsAnalytics **May 2021 – August 2021**
Data Analytics Intern *Kolkata, West Bengal*

- Implemented SEIR model (susceptible, exposed, infectious, recovered) to forecast COVID-19 cases Trends.
- Played an essential role in **collecting, cleaning, preparing** data for further analysis, and creating visualizations.
- Utilized Seaborn and Matplotlib for **data visualizations** and SciPy for **curve fitting**.

Projects

Vibration Analysis of HydroCyclone | *Masters Thesis Project - Python* **January 2023 - May 2023**

- Collected time-series vibration profile data from an Industrial HydroCyclone using accelerometers and a Raspberry Pi.
- Implemented **Fast Fourier Transform** Algorithm(FFT) for denoising vibration signals, achieving a 6.15 dB increase in SNR, outperforming other denoising techniques.
- Discovered a positive correlation between feed inlet pressure and vibration intensity, quantified through GRMS and RMS values, across various spigot and vortex-finder configurations of HydroCyclone.

Food Delivery - Web Application | *Personal Project - ReactJS, JavaScript* **May 2022 - August 2022**

- Built a responsive food delivery website that allows users to add food items to the cart and place orders.
- Developed front-end using HTML, CSS, JS, ReactJS, and Firebase as Database and deployed on Netlify.

Technical Skills

Languages: Python, C/C++, Java, JavaScript, HTML, CSS, MySQL

Tools/Frameworks: ReactJS, Git/Github

Libraries: NumPy, Pandas, scikit-learn, PySpark, spaCy, NLTK, transformers, BERTopic, OpenCV, SciPy, Matplotlib, Seaborn, Folium

Achievements

- All India Rank 4 in All India Maths Science Talent Examination 2014-2015 - Gold Medal.
- Solved 300+ problems on LeetCode and 3-Star competitive programmer on CodeChef.
- All India Rank 429 in **GATE**-2022 Mining Engineering.