Prashant Kalepu

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EDUCATION AND HONORS

Amity University Madhya Pradesh, Amity School of Engineering and Technology
Bachelors in Technology in Computer Science Engineering June 2020 - June 2024

- Cumulative GPA: 8.37/10.0
- Minor degree in Artificial Intelligence and Machine Learning.

PROFESSIONAL EXPERIENCE

Omdena.
Junior Machine Learning Engineer August 2022 - November 2022

- Utilized python to implement supervised NLP and deep learning techniques for developing an end-to-end pipeline consisting of language translation model and an interface, worked over 1TB of text corpus, with an accuracy of 93.54%.
- The solution helps in translating the input data from Bhutanese National Language (Dzongkha) to English which would further help the public in accessing the written works and information.
- Presented results to the Druk Holding and Investments(DHI), the commercial arm of the Royal Government of Bhutan, and wrote a documentation detailing end-to-end implementation and working of the project to present to senior leadership.

SKILLS

- **Programming Languages:** Python, R, HTML, CSS, Java, C++
- **Big Data & Machine Learning:** Python libraries (eg. scikit-learn, numpy, pandas, scipy, cv2, tensorflow), SQL
- **Data Science & Miscellaneous Technologies:** ETL, data science pipeline (cleansing, wrangling,visualization, modeling, interpretation), statistics, time series, hypothesis testing, oop, git, python-flask, tableau, computer vision, machine learning, deep learning, jupyter notebook, data structures and algorithms, AWS sagemaker studio lab, microsoft office(excel, word, powerpoint).

PROJECTS AND LEADERSHIP

Accomplishments

Team Leader
Navigation and obstacle avoidance for blind people using backtracking algorithm October 2022 - December 2022

- Developed and demonstrated the prototype at Vishlesan Innovative Ideas Contest (VIIC-2022) organized in conjunction with ANTIC-2022 Conference by Banaras Hindu University in collaboration with Technology Innovation Hub, IIT - Patna.
- Surveyed 20+ blind children and consulted with doctors and psychiatrist to create prototype.
- Pitched throughout the ideathon and ultimately chosen as top 10 of 87 teams.

Team Leader
Real-time crime detection using computer vision *July 2022* - August 2022

- Led team of 5 students to develop a real-time crime detection system with an accuracy of 85.6%, and designed a Flask web app to integrate the model for a live dashboard with 24 frames per second processing speed.
- Used LSTM-CNN based approach using UCF crime video dataset of 25 GB. Loaded the dataset in chunks by reducing the memory usage by 3.67GB.
- Built and demonstrated the prototype at national level MP Police Hackathon organized by JNCT Bhopal in collaboration with MP Police, and backed 1st prize in the hackathon.

Projects

Autism spectrum disorder prediction (Python, sklearn, numpy, pandas, matplotlib, seaborn)

- Developed an automated ASD prediction model with minimum behavior sets selected from the diagnosis datasets of each. Out of five models that applied to the dataset; logistic regression was observed to give the highest accuracy and F1 score of 100%.
- Cleansed and wrangled the imbalanced data, performed hypothesis testing to support the evaluation results of test data.
- Project helped in reducing the diagnosis time and provided an optimized screening tool for identifying the onset of ASD.

Credit card fraud detection (Python, sklearn, numpy, pandas, matplotlib, seaborn)

- Developed an automated credit card fraud detection model that monitors the user's purchase record and predicts if a transaction is illegal with an accuracy of 99% and AUC score of 82%.
- Performed statistical analysis and handled the imbalanced data using sklearn and numpy to produce excellent results.
- The model can help clients protect themselves from malicious practices by leveraging insights into fraudulent transactions.

Instacart's Market Basket Analysis and Product Recommendation (Python, tensorflow, numpy, pandas, matplotlib, flask)

- Developed a product recommendation engine to provide users with personalized product recommendations based on their previous purchases or frequently bought items at that hour of that day for new customers.
- Analyzed the Instacart's customer orders dataset containing over 3 million grocery orders from 200,000 Instacart users to predict which product a user would order next based on their past purchases.
- Improving overall efficiency and convenience for users by streamlining the ordering process and reducing the need for manual selection of products.