Sahej Hira

SahejHira SahejHira sahej.k.hira@gmail.com +91-9811268017

Education

Eternal University Sept 2021 - Present
Bachelor of Technology in Computer Science Engineering *Current CPI: 7.20/10.0*

Nava Hind Girls Senior Secondary School - July 2021
Higher Secondary Education *CBSE*

Nava Hind Girls Senior Secondary School - July 2019
Secondary Education *CBSE*

Skills

Languages:Python, HTML/CSS, Javascript, Typescript

Tools: Git/GitHub, Figma, Canva

Framework/Library: TensorFlow, Flask, NTLK, Firebase, Flutter, React

Certifications

- Data structures and algorithms
- Python and problem solving
- Machine learning
- Artificial intelligence
- Natural language processing
- Neural networks and CNN

Projects

Image Classifier | *TensorFlow(including Keras), TensorFlow Datasets, TensorFlow Hub, Python, Matplotlib, NumPy* Jan 2024 - Jan 2024

- Developed and trained a deep neural network using TensorFlow for image classification of flowers.
- Utilized TensorFlow Datasets and TensorFlow Hub for data handling and pre-trained model integration..
- Implemented a command-line application allowing users to predict flower names using a saved model.

Part of Speech Tagging with Hidden Markov Models | *Pomegranate,Python,NLP, PGM* Jan 2024 - Jan 2024

- Led the development of a Part-of-Speech Tagging project using Hidden Markov Models (HMMs), implementing a baseline Most Frequent Class (MFC) Tagger for comparison.
- Implemented and trained the MFC Tagger as a baseline and developed an HMM-based Part-of-Speech Tagger using the Pomegranate library.
- Conducted a thorough comparative analysis between the HMM Tagger and the MFC baseline.
- Achieved significant improvement with the HMM Tagger [training accuracy basic hmm model: 97.54%, testing accuracy basic hmm model: 95.95%] over the MFC baseline [training accuracy mfc_model: 95.72%, testing accuracy mfc_model: 93.02%], emphasizing the effectiveness of HMMs in enhancing Part-of-Speech tagging accuracy.

Finding Donors for CharityML | *Python, NumPy, Pandas, Sklearn, GaussianNB, DT, RFC* Dec 2023 - Jan 2024

- Implemented and evaluated multiple supervised learning models, including Gaussian Naive Bayes, Decision Trees, and RFC.
- Explored the impact of feature selection on model performance by training on both the full dataset and a reduced feature set.
- Selected RFC as the final model, achieving the highest F-score and balancing predictive accuracy with computational efficiency. Model Evaluation used: F-score, GridSearchCV, Feature Importance Analysis
- Implemented hyperparameter tuning and feature selection to optimize model performance, resulting in improved predictive accuracy(0.8545), efficiency and reduced processing times.

Ongoing work

Research work on landslides in hilly areas Feb 2024

VFierce - women entrepreneurship portal using HTML, CSS, and javascript Nov 2023

Coding Platforms

- **Leetcode** — *200+ problems*
- **Coding Ninjas** — *2007 points*