Harshit Agarwal

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Education

Gujarat Technological University, Ahmedabad
Bachelor of Engineering in Computer Engineering, May 2020
CGPA: 8.75/10

Lancers Army School, Surat
Gujarat Secondary Education Board
Science (12th Grade), May 2016 Percentage: 92%

Skills

Programming Languages: **Python, Java, C++, C**

Artificial Intelligence**: TensorFlow, Keras, PyTorch, Scikit Learn, Matplotlib, Pandas, Numpy, OpenCV, NLTK, Neural Networks, Exploratory Data Analysis**

Web Technology: **HTML5, CSS3, JavaScript**, **PHP, Flask, Selenium, Beautiful Soup**

Database**: MySQL**

Experience

Data Sciene Intern
UnMazer.AI
June, 2021 – Present
- Data Cleaning and Extraction.
- Developing footfall analysis module for tracking any locations visit information.
- Data analysis on geolocation data for providing better information and knowledge to client for business intelligence.
- Working on Synthetic Data Generation for user specific GPS location.

Team Leader – Learning Management System
Ignitus, **Pittsburgh, PA**
March, 2021 – June, 2021
- Developed e-learning contents and software modules backing the Ignitus Learning Management System to be offered to the University of Michigan students.

Undergraduate Research Assistant
Sarvajanik College of Engineering and Technology, **Gujarat, India**
Jan, 2020 – May, 2020
- Assisting in the research project related to Music Analysis and Generation using GAN under Prof. (Dr.) Keyur Rana.

Data Science Intern
Krupa Diam., Maharashtra, India, May 2019 – June 2019
- Team member for building predictive model for company's sales, inventories and budgetary requirements predictions.

Volunteer
Disha NGO, Gujarat, India,
May 2019 – June 2019
- Engaged in helping Autistic and other special children, Surat, 2016

Publications

- Harshit Agarwal, Gaurav Jariwala and Vraj Jadhav, "**Sentimental Analysis of News Headlines for Stock Market**", IEEE International Conference for Innovation in Technology 2020, pp 1-5, Bengaluru.
- Harshit Agarwal, Gaurav Jariwala and Akshit Shah," **Analysis and Prediction of Stock Market Trends using Deep Learning**", Proceedings of First International Conference on Computing, Communications, and Cyber-Security (IC4S 2019). Lecture Notes in Networks and Systems, vol 121, pp 521-531, Springer, Singapore
- Harshit Agarwal and Gaurav Jariwala," **A Neural Network Based Approach for Operating System**", Innovative Data Communication Technologies and Application (ICIDCA 2019), Lecture Notes on Data Engineering and Communications Technologies, vol. 46, pp 594-599, Springer, Cham.
- Harshit Agarwal and Gaurav Jariwala," **Analysis of Process Scheduling Using Neural Net In Operating System**", Inventive Communication and Computational Technologies [ICICCT 2019], Lecture Notes in Networks and Systems, vol. 89, pp 1003-1014, Springer, Singapore.

Projects

Analysis and Prediction of Stock Market Trends, 2019-2020
- Achieved around 93% accuracy by using Recurrent Neural Network for predicting the values of open, close, high and low of a particular stock.
- Support Vector Machine and Naïve Bayes was used for the sentimental analysis of news headlines to predict the trend of stock price.
- Used K-Means clustering to make groups of similar stocks.

Diagnosing COVID-19 from CT scan using Deep Learning and Transfer Learning Algorithms, 2020
- Transfer learning is used on different Convolution Neural Network architecture to detect COVID-19 pneumonia in patients using CT Scan.
- VGG16, VGG19, MobileNetV2, ResNet152 V2, InceptionV3, LeNet5, InceptionResNetV2 are the models used.
- Using ensemble method, accuracy upto 80 percent was achieved on test set.

Fake News Detector, 2020
- Fake news is detected from article's text, headline and subject, using Recurrent Neural Network, Bidirectional RNN, 1D-Convolution Neural Network and 1D-CNN-LSTM.
- Ensemble method is used to integrate all the model to improve accuracy up to 99%.

An Image classifier for TB detection using X-ray Scan, 2019
- Convolution Neural Network is used to detect TB in patients using X-ray. The user needs to upload their chest X-ray and the system classify them in positive or negative category.
- The system was trained and tested on two publicly available datasets: Sbenzhen chest X-ray set and Montgomery Country chest X-ray set (MC). Accuracy of 90 percent was achieved.
- Webapp was made using Flask and deployed on Heroku.