Harshit Agarwal

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# Education

## Master of Computer Science | May 2023 | Dalhousie University

* GPA: 4.2/4.3
* Related coursework: Research Methods and Statistics, Natural Language Processing, Machine Learning, Process of Data Science

## Bachelor Of Computer Engineering | May 2020 | Gujarat Technological University

* GPA: 8.75/10

# Skills

* Programming Languages: **Python**
* Artificial Intelligence: **TensorFlow, Keras, PyTorch, Scikit Learn, Matplotlib, Pandas, NumPy, OpenCV, NLTK, Neural Networks, Exploratory Data Analysis**
* Cloud: **AWS EC2, AWS SageMaker, S3 Storage**
* Web Technology: **HTML5, CSS3, Flask, Streamlit, Dash Framework**

# Experience

## Teaching Assistant | Dalhousie University | Jan 2023 – April 2023

* Teaching Assistant for CPST 1203: Technical Communication II where I conduct tutorials, mark assignments, and help students with coursework.

## Research Assistant | Dalhousie University | Feb 2022 - Present

* Assisting in the research project related to initiating the evaluation of services to promote resilience and mental health among families of children with disabilities under Prof. (Dr.) Parisa Ghanouni.

## Consultant, Part Time | AlphaSights | August 2021 - Present

* Consulting AlphaSights's clients on Privacy Engineering, Machine Learning and Deep Learning solutions.

## Data Scientist| UnMazer.ai | June 2021 – Dec 2021

* Performed insightful geolocation data analysis and synthetic data generation for user-specific GPS location data.

## Team Leader – Learning Management System | Ignitus | 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.

## Research Assistant | Sarvajanik College Of Engineering And Technology | Jan 2020 – May 2020

* Assisting in the research project related to Music Analysis and Generation using GAN under Prof. (Dr.) Keyur Rana.

# Volunteer Experience

## Let’s Talk Science | April 2022 - Present

* Volunteered as a STEM Educator, delivering engaging and impactful learning experiences to students and community members to encourage them to pursue careers in STEM fields.

## Disha NGO | May 2019 – June 2019

* Engaged in helping Autistic and other special children, Surat, 2016

# Publications

* **“Sentimental Analysis of News Headlines for Stock Market**”, IEEE International Conference for Innovation in Technology 2020.
* **“Analysis and Prediction of Stock Market Trends using Deep Learning**”, Proceedings of First International Conference on Computing, Communications, and Cyber-Security 2019.
* “**A Neural Network Based Approach for Operating System**”, Innovative Data Communication Technologies and Application 2019.
* “**Analysis of Process Scheduling Using Neural Net In Operating System**”, Inventive Communication and Computational Technologies 2019.

# Projects

## Common N-Gram Method: A Promising Approach to Detecting Mental Health Illness on Social Media | Jan 2022 – Ongoing

* This thesis research is being done under Prof. (Dr.) Vlado Keselj.
* Implemented a novel Common N-gram Method to predict mental illness from social media posts.
* Compared the performance of the Common N-gram Method to state-of-the-art deep learning models such as CNN-LSTM.
* Employed Relative N-gram signature and word embedding techniques to interpret model learning.

## Mood Classification of Songs Using Lyrics And Audio Features | April 2022

* Conducted an experiment to compare the suitability of audio and lyrics for mood classification.
* Utilized Bi-directional LSTM and SVM techniques to analyse lyrics of songs.
* Results showed that the SVM model performed significantly better than other models, and audio features were more effective in predicting musical track emotions compared to lyrics.

## Analysis And Prediction Of Stock Market Trends | April 2020

* Utilized Recurrent Neural Network to predict stock values (open, close, high, low) with an accuracy of 93%.
* Implemented Support Vector Machine and Naive Bayes for sentimental analysis of news headlines to forecast stock price trend and employed K-Means clustering to group similar stocks.