Jai Kashyap

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Education

Current Computer Science Student at Georgia Tech | Graduation Date: May 2028

Current Coursework

• CS 1331: Object Oriented Programming

• CS 2050: Discrete Mathematics for Computer Science

• MATH 1554: Linear Algebra

• PHYS 2211: Physics I

• CS 1100: Freshman Leap Seminar

Rock Ridge HS & Academies of Loudoun: Class of 2024

• Class Rank: 12/357

• GPA: 4.66

Experience

Research Intern, GMU

Sep 2023 - May 2024

- Training a 3D-Convolutional Neural Network on the MIRACL-VC1 lip-reading image dataset and self-created dataset
- Using Python and machine learning libraries like TensorFlow and Keras to predict spoken words based on lip movements
- Link to Preprint

Research Intern, Quest Student Research Institute

Jun 2023 - Aug 2023

- Used real world COVID-19 data from US, UK, and Canada
- Trained a deep neural network to extract features from data with factors such as the number of ICU patients, vaccination rates in the area, and preexisting health conditions.

Software Engineer, Intern, Samskrita Bharati

Oct 2022 - Jan 2023

- Worked with Flask, a web framework written in Python to create a pronunciation feedback tool for new Sanskrit language learners.
- The tool used MFCC (Mel-frequency cepstral coefficients) to compare a correctly spoken word or sentence in Sanskrit, to the new speaker's pronunciation. The app then returns a similarity score to provide an assessment of the speech pattern.

Projects

Sentiment Analysis on Twitter Stock Market Data

Github Link

- Used Bidirectional Encoding Representations from Transformers (BERT) to classify tweets.
- Programmed using Python and libraries such as PyTorch and Keras.

COVID-19 Mask Wearing Detection

Github Link

- Used a Convolutional Neural Network to predict on 3 classes (wearing mask, not wearing mask, and improperly wearing mask) with 97% accuracy.
- The system uses computer vision techniques to identify faces and then applies machine learning algorithms to determine if a person is wearing a mask, wearing it incorrectly (e.g., not covering the nose), or not wearing a mask at all.

Germman Verb Conjugation

Github Link

• Used Python and Selenium to build an NLP program that conjugates German verbs, using user-provided pronouns and tenses.