Anish Nethi

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EDUCATION

The University of Texas at Austin *Aug 2024 - Present*
Master of Science in Computer Science
Focus Areas: Software Development, AI/ML, Computer Vision, Data Science

Mahindra University, École Centrale School of Engineering *Aug 2020 - Jun 2024*
Bachelor of Technology in Computer Science and Engineering CGPA: 8.84/10.0, Rank: 5/214

TECHNICAL SKILLS

Languages: Python, C/C++, MATLAB, HTML, CSS
Tools & Frameworks: Jupyter, Visual Studio, Tensorflow, MySQL, OpenCV, PyTorch, Hadoop, Spark, Figma, Latex, & Scikit-Learn

EXPERIENCE

The University of Texas at Austin, Teaching Assistant *Aug 2024 - Present*
- Mentored students on the core concepts of Discrete Mathematics, offering tailored support to improve their understanding and confidence

Indian Institute of Technology Guwahati, Research Assistant *Jul 2023 - Jul 2024*
- Focused on improving the precision of eye tracking in VR setups through work in differentiating saccades and fixations to generate accurate and natural scanpaths in the space-time domain

Damage in Materials and Structures Lab - Arizona State University, Research Intern *May 2023 - Jun 2024*
- Researched and implemented Deep Learning and Machine Learning techniques to enhance the accuracy of road marking classification by integrating textural elements, with a maximum accuracy improvement of up to 20%

AlgoFnO, Machine Learning Intern *Dec 2022 - Mar 2023*
- Reduced the size of a time-series dataset from (1236760 x 7) to (41281 x 18) using PCA and t-SNE on sliding-window engineered features while keeping the margin of error around 2% with the help of the TSFresh library

Mahindra University, Research Assistant *Oct 2022 - Oct 2023*
- Preprocessed and featurized time-series data converting it to a regression problem to predict volcano eruption time using various regression algorithms, resulting in accuracy improvement from 58% to 84%

National University of Singapore, Academic Intern *Jun 2022 - Jul 2022*
- Led end-to-end BMI Classification project using CNNs like VGG16 and Xception, with web-scraping APIs for data gathering and methods like data augmentation, instance segmentation, and denoising for preprocessing

PROJECTS

Predicting Naturalistic Eye Scanpaths from Saliency Maps: Spatial and Temporal Modeling of Eye Movement Behavior *Jul 2023 - Jul 2024*
A solution for predicting the natural path an eye would trace when viewing a scene, simulating a person's gaze
- Gathered and preprocessed scanpath data to generate a high-frequency (90 Hz) dataset capturing the subtle dynamics of saccades and fixations
- Developed and trained mathematical models to generate realistic scanpath sequences by calculating distances from the initial coordinate, incorporating distinct considerations for fixation durations, saccadic speeds, and transition times between coordinates

Cohesive Group Emotion Recognition *Jan 2023 - Jun 2023*
A DL solution for predicting the combined emotion of a group based on individual emotional features
- Employed pre-trained models such as YOLOv3 for face detection and extraction, and DeepFace for emotion recognition on individual faces; combined individual emotions through majority vote and average emotion aggregation
- Evaluated performance using Correlation, Cross-Entropy, and Top-n accuracy, achieving a final top-2 accuracy of 90.32%

BMI Prediction for Full Body Images using PoseNet Embeddings *Jun 2022 - Jul 2022*
A solution that uses ML and DL to classify a person on BMI based solely on full-body images
- Web-scraped full-body images and implemented quantization, segmentation, and custom Deep Learning models for data preprocessing and a pre-trained PoseNet model for feature extraction
- Trained and compared over 40 regression models based on Adjusted R-squared, RMSE, and run-time

ACHIEVEMENTS & AWARDS

NVIDIA Student Ambassador *Jan 2023*
- Co-founded the first NVIDIA Student Ambassador Program in India, led the Computer Vision division to organize hackathons and conduct workshops across multiple colleges

Best Presenter Award *Sep 2023*
- Received the Best Presenter Award at ICETCI-23

Academic Scholarship Recipient *Jan 2023, Oct 2023*
- Received academic scholarship worth $2500 by Mahindra University for the academic years 2022-2023 and 2023-2024

* Presented & Published 4 research papers at international conferences - available on Google Scholar *