

# Anish Nethi

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## EDUCATION

### University of Texas at Austin

Master of Science in Computer Science

Aug 2024 - Present

### Mahindra University, École Centrale School of Engineering

Bachelor of Technology in Computer Science and Engineering

Oct 2020 - Jun 2024

CGPA: 8.84, Rank: 5/214

## EXPERIENCE

### University of Texas at Austin

Teaching Assistant

Aug 2024 - Present

Austin, Texas

- Conducted office hours and helped students of the course Discrete Mathematics.

### Damage in Materials and Structures Lab, Arizona State University, USA

Research Intern

May 2023 - Jun 2024

Remote

- Researched and implemented deep learning and machine learning techniques to enhance the accuracy of road marking classification by integrating textural elements, anticipating a potential accuracy improvement of up to 20%.

### Indian Institute of Technology, Guwahati

Research Assistant

Jul 2023 - Jul 2024

Remote

- Focused on improving the precision of eye tracking in VR setups through work in differentiating saccades and fixations to generate accurate and natural scanpaths, with ongoing research efforts.

### InterviewKickstart

Teaching Assistant

Aug 2023 - Jul 2024

Remote

- Assessed students' performance and provided detailed feedback on their GraphML and statistical ML assignments and projects.

### Mahindra University

Research Assistant

Oct 2022 - Oct 2023

Hyderabad, India

- Preprocessed and featurized time-series data converting it to a regression problem to predict volcano eruption time using Gradient Boosting Regressor, Random Forest Regressor, and RANSAC Regressor, resulting in accuracy improvement from 58% to 84%.

### AlgoFnO

Machine Learning Intern

Dec 2022 - Mar 2023

Hyderabad, India

- Used the TSFresh library for feature engineering by sliding window technique on Time-Series data reducing the overall size of the dataset from (1236760 x 7) to (41281 x 18) using PCA and t-SNE while keeping the margin of error around 2%.

### National University of Singapore

Academic Intern

Jun 2022 - Jul 2022

Singapore, Singapore

- Led end-to-end BMI Classification project using CNNs like VGG16 and Xception, by using DuckDuckGo and Yahoo APIs for data gathering and methods like data augmentation, instance segmentation, and denoising for preprocessing.
- Grade: A

## SUBMISSIONS & PUBLICATIONS

### BMI Prediction for Full Body Images using PoseNet Embeddings

International Conference on Emerging Techniques in Computational Intelligence, 2023

**Anish Nethi**, Sanatan Sukhija, Yayati Gupta

### Detecting DeepFakes: A Deep Convolutional Neural Network Approach with Depth Wise Separable Convolutions

International Conference on Emerging Techniques in Computational Intelligence, 2023

Regatte Varshith Reddy, **Anish Nethi**, Sanatan Sukhija, Yayati Gupta

### Multiplicative Gaussian Noise Removal using Partial Differential Equations and Activation Functions: A Robust and Stable Approach

International Conference on Algorithms, Computing and Systems, 2023

Soumen Sinha, **Anish Nethi**, Mahipal Jetta

### Cohesive Group Emotion Recognition Using Deep Learning

International Winter Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/  
Distributed Computing, 2023

**Anish Nethi**, Dhathri Meda, Chinnamallu Yashwanth Reddy, Shashi Kanth Koppala, Anusha Nandy, Varnika Bethireddy, Sanatan Sukhija and Yayati Gupta

ACHIEVEMENTS & AWARDS

- Best Presenter Award

Sep 2023

- Received the Best Presenter Award at ICETCI-23 for the paper titled "Detecting DeepFakes: A Deep Convolutional Neural Network Approach with Depth-Wise Separable Convolutions."
- NVIDIA Student Ambassador

Jan 2023

- Member of the pioneering NVIDIA Student Ambassador Program in India, fostering innovation and collaboration in the field of Computer Vision.
- Top Ranked Intern at National University of Singapore

Jul 2022

- Ranked top 15 among 100 interns for collaborative and results-oriented approach in the month-long internship.
- Academic Scholarship Recipient

Jan 2023, Oct 2023

- Awarded academic Scholarship worth \$2500 by the Vice Chancellor of Mahindra University for excellent academic performance in the academic years 2022-2023 and 2023-2024.

PROJECTS

- Volcano Eruption Time and Damage Prediction

Oct 2022 - Oct 2023

Mahindra University, Hyderabad - Prof. Sanatan Sukhija

An ML solution for predicting the time of a volcanic eruption and potential damage caused by converting a time-series problem into a regression problem.

Role:
  - Preprocessed data by converting time series data into a vectorized format and engineered 750 features from the time series vectors.
  - Trained Gradient Boosting Regressor, Random Forest Regressor, and RANSAC Regressor, and conducted model comparison for 40 models using Adjusted R squared, R squared, and RMSE.
- BMI Prediction for Full Body Images using PoseNet Embeddings

Jun 2022 - Jul 2022

National University of Singapore, Singapore

A solution that uses ML Algorithms and DL architectures to predict the class of Body Mass Index of a person solely based on full-body images.

Role:
  - Scraped full-body images using DuckDuckGo scraper, BeautifulSoup, and Yahoo’s API and implemented quantization, segmentation, and custom Deep Learning models for data preprocessing and pre-trained PoseNet model for feature extraction.
  - Trained Lasso LARS, Transformed Target Regressor, and ElasticNet CV, and conducted a model comparison of 40 models based on Adjusted R-squared, RMSE, and run-time.
- Cohesive Group Emotion Recognition

Jan 2023 - Jun 2023

Mahindra University, Hyderabad - Prof. Sanatan Sukhija

A DL solution for predicting the combined emotion of a group based on individual emotional features.

Role:
  - Employed super-resolution models LapSRN, ESRGAN, and ESPCNN.
  - 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%.

TECHNICAL SKILLS

**Languages:** Python, C/C++, MATLAB.  
**Tools & Frameworks:** Jupyter, Visual Studio, Tensorflow, MySQL, OpenCV, Latex & Scikit-Learn.

LEADERSHIP

- Alumni Relations Center, Mahindra University

Joint Alumni Relations Officer, Dec 2022 - Present

- Promoted alumni engagement through interactive sessions and facilitated mentorship opportunities for current students with accomplished professionals in various fields.
- Blue Cross of Hyderabad

Volunteer, Sep 2019 - Present

- Provided compassionate care to shelter animals and actively promoted animal adoption through adoption drives in Hyderabad.

REFERENCES

**Ravi Kiran Yellavajjala, Associate Professor of Arizona State University**  
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ravi.kiran@asu.edu

**Debangra Raj Neog, Assistant Professor of IIT Guwahati**  
Ph No.: +91-36125 83504  
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**Sanatan Sukhija, Assistant Professor of Mahindra University**  
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sanatan.sukhija@mahindrauniversity.edu.in