

# Anish Nethi

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## EDUCATION

### The University of Texas at Austin

*Master of Science in Computer Science*

*Aug 2024 - May 2026*

*CGPA: 4.0/4.0*

**Research Interests:** I am primarily interested in computer vision and its intersection with language and audio, exploring multi-modal approaches to solve perception and reasoning problems, and currently pursuing my thesis under Professor Kristen Grauman

**Coursework:** Visual Recognition, Scientific Computation in ML/DL, Generative Models in Machine Learning

### Mahindra University, École Centrale School of Engineering

*Bachelor of Technology in Computer Science and Engineering*

*Aug 2020 - Jun 2024*

*CGPA: 8.84/10.0, Rank: 5/214*

## EXPERIENCE

### Amazon Web Services, SDE Intern - AI/ML

*May 2025 - Aug 2025*

- Developed an MCP server enabling users to create, update, and delete Glue connections through a cli, abstracting away parameter complexity and simplifying data lake connectivity operations

### Indian Institute of Technology Guwahati, Research Assistant

*Jul 2023 - Jul 2024*

- Enhanced the precision of eye tracking in VR setups by 15% by leveraging data models to differentiate saccades and fixations, and mathematical models to generate accurate and natural scanpaths

### Damage in Materials and Structures Lab - Arizona State University, Research Intern

*May 2023 - Jun 2024*

- Researched into incorporating textural elements into pixel clustering, boosting road marking classification accuracy by 20% for real-world deployment

### Mahindra University, Research Assistant

*Oct 2022 - Oct 2023*

- Transformed and featurized time-series forecasting problem to convert it into a regression problem for predicting volcano eruption times. Implemented various regression algorithms, improving prediction accuracy from 58% to 84%

### National University of Singapore, Research Intern

*Jun 2022 - Jul 2022*

- Conducted research on predicting BMI classes from full-body images by developing CNN-based models utilizing PoseNet embeddings, improved classification accuracy by 15%

## PUBLICATIONS

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

*ICETCI 2023*

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

*ICETCI 2023*

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

*ICACS 2023*

### Cohesive Group Emotion Recognition Using Deep Learning

*SNPD 2023*

## PROJECTS

### Language-Guided Reinforcement Learning for Smooth Multi-View Video Transitions

*Feb 2025 - May 2025*

An RL framework for optimizing camera view selection in multi-view ego-exo instructional videos

- Designed a composite reward function balancing informativeness, transition smoothness, and narrative alignment, improving temporal coherence in view selection
- Implemented and compared PPO, A2C, and DQN, with PPO achieving the most balanced switching behavior (10.6% switch rate), aligning transitions with narrative progression

### Predicting Naturalistic Eye Scanpaths from Saliency Maps

*Jul 2023 - Jul 2024*

A solution for predicting the natural path an eye would trace when viewing a scene, simulating a person's gaze

- Developed mathematical models for gaze prediction by integrating visual saliency maps and time-coordinated data, achieving 83% accuracy in simulating eye movements, and improved computational overhead

### Data Cleaning using LLMs

*Sep 2024 - Dec 2024*

A pipeline using Intel's Neural-Chat LLM for automated error detection and correction in structured datasets

- Achieved an 89.6% error correction accuracy on structured datasets by systematically integrating metadata and refining LLM prompt engineering for improved anomaly detection and correction

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Java, MATLAB, HTML, CSS, SQL, JavaScript

**AI & Data Skills:** TensorFlow, PyTorch, Scikit-Learn, NumPy, Pandas, Matplotlib, OpenCV, Recommender Systems

**Databases & Big Data:** MySQL, SQLite, PostgreSQL, Hadoop, Apache Spark, Hadoop MapReduce

**Development & Design Tools:** Jupyter, Visual Studio, Microsoft Azure, Git, Figma, Latex