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Nithin Reddy

EDUCATION

University of Michigan, College of Engineering   Ann Arbor, MI
Bachelor of Science in Engineering in Electrical Engineering; GPA: 3.8/4.0   *Aug 2023 – May 2026*

- **Relevant Courses:** Data Structures and Algorithms, Electronic Circuits, Human-Robot Systems, Computational Linear Algebra, Multivariable and Vector Calculus, Discrete Mathematics
- **Organizations:** Autonomous Robotic Vehicle Team (UMARV), Indian American Student Association (IASA)

EXPERIENCE

University of Michigan Autonomous Robotic Vehicle Team   Ann Arbor, Michigan
Computer Vision Engineer   *Jan 2024 - Present*

- Worked as part of computer vision subteam to help build software for team's autonomous vehicle
- Conducted research on machine learning models to potentially implement more accurate CV model
- Analyzed 3 papers on machine learning models and convolutional neural networks for semantic segmentation

Michigan Data Science Team   Ann Arbor, Michigan
Machine Learning Engineer   *Sep 2023 - Apr 2024*

- Collaborated in small team to develop machine learning model that could detect types of network attacks
- Preprocessed data to convert non-numerical data to numerical data from collection of over 1000 attacks
- Trained and tested different machine learning models using train-test-split from scikit-learn library
- Developed feed forward algorithms for use in neural networks that were made from scratch

PROJECTS

Network Intrusion Detection
Built using Decision Trees

- Features used to train the model were the features that were deemed important, which were above a 0.04 important threshold (importance values were determined by using a random forest classifier)
- Final model was trained off of 60% of the data, the other 40% was used to test, and achieved 99% accuracy

Car Crash Severity Predictor
Built using Gradient Boost

- Preprocessing included removing rows in the dataset that contained incomplete information
- Features deemed crucial to successfully predicting car crash severity that were used to train the model included road conditions, injuries, road surface, road surface conditions, latitude, and longitude
- Final model was trained off of 70% of the data, the other 30% was used to test, and achieved 86% accuracy

Startup Success Predictor
Built using TensorFlow

- Preprocessing involved removing columns with non-numerical data and applying a min-max normalization
- Final model was trained off of 70% of the data, the other 30% was used to test, and achieved 73% accuracy

SKILLS

Technical: Python, C++, MatLab, Java, JS, PyTorch, TensorFlow, scikit-learn, Pandas, NumPy, Neural Networks

Interpersonal: Project Management, Conflict Resolution, Adaptability, Integrity, Written Communication

Interests: Biking, Cooking, Tennis