

# Michael Evans

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## EDUCATION

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### Old Dominion University

M.S. in Electrical & Computer Engineering

Norfolk, VA

Anticipated May 2027

Thesis: *AI Framework for Disease-Agnostic Brain Glucose Hypometabolism Prediction*

B.S. in Computer Science

May 2025

### Tidewater Community College

A.S. in Computer Science

Norfolk, VA

May 2023

## PUBLICATIONS

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### Refereed Papers

**C2.** M. L. Evans, M. Machado, R. Johnson, L. Escamilla, A. Vadella, B. Froemming-Aldanondo, T. Rastoskueva, M. Jostes, D. Butani, R. Kaddis, C. Chung, and J. Siegel. A Roadside Unit for Infrastructure Assisted Intersection Control of Autonomous Vehicles. *IEEE International Conference on Electro/Information Technology (EIT)* 2025.

**C1.** B. Froemming-Aldanondo, T. Rastoskueva, M. L. Evans, M. Machado, A. Vadella, L. Escamilla, R. Johnson, M. Jostes, D. Butani, R. Kaddis, C. Chung, and J. Siegel. Evaluating Low-Resource Lane Following Algorithms for Compute-Constrained Automated Vehicles. *IEEE International Conference on Artificial Intelligence, Robotics, and Control (AIRC)* 2025.

**W1.** M. L. Evans, D. Soós, E. Landers, and J. Wu. MSVEC: A Multidomain Testing Dataset for Scientific Claim Verification. *National Workshop for REU Research in Networking and Systems (REUNS @ ACM MobiHoc)* 2023.

### Preprints

**P1.** M. A. Witherow, M. L. Evans, A. Temtam, H. R. Okhravi, and K. M. Iftekharuddin. Machine Learning-Enhanced Non-Amnesic Alzheimer's Disease Diagnosis From MRI and Clinical Features. *arXiv* 2026.

## TALKS

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### A Roadside Unit for Infrastructure Assisted Intersection Control of Autonomous Vehicles

IEEE International Conference on Electro/Information Technology, Valparaíso University, 2025.

### Robust Lane Following with V2X Traffic Management

Research Experience for Undergraduates, Lawrence Technological University, 2024.

### The Potential of Large Language Models in Evaluating Scientific Claims

Undergraduate Research Symposium, ODU Digital Commons, 2024.

### MSVEC: A Multidomain Testing Dataset for Scientific Claim Verification

The 8th National Workshop for REU Research in Networking and Systems, George Washington University, 2023.

### Scientific News Verification With GPT

Research Experience for Undergraduates, Old Dominion University, 2023.

## RESEARCH EXPERIENCE

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### Graduate Research Assistant

Sept 2025-Present

Old Dominion University, advised by Dr. Khan Iftikharuddin

Vision Lab

- Developed a standardized, BIDS-compliant preprocessing pipeline for multimodal neuroimaging (sMRI, fMRI, FDG-PET) using MATLAB, fMRIPrep, and Clinica, ensuring reproducible research outcomes.

## Undergraduate Research Assistant

Sept 2024-Sept 2025

Old Dominion University, advised by Dr. Khan Iftakharuddin  
Vision Lab

- Developed a FreeSurfer pipeline on an HPC cluster to extract 100,000 volumetric features in parallel from 500 patient MRI scans, enabling training of a random forest model for Alzheimer's disease classification.
- Visualized an ROI-map on an anatomically average brain template to highlight brain regions with significant features ( $\alpha = 0.05$ ) for Alzheimer's classification with volumetric group mean z-score color coding.
- Fine-tuned the VGG16 convolutional neural network (CNN) with PyTorch for facial recognition of 4 lab members in an autonomous surveillance robot capable of identifying, tracking, and following individuals.

## NSF REU Intern - Developing Self-Drive Algorithms for Electric Vehicles

May-July 2024

Lawrence Tech and Michigan State University, advised by Drs. Chan-Jin Chung and Josh Siegel  
Computer Science & Artificial Intelligence Robotics Lab

- Designed an adaptive speed algorithm to reduce acceleration and braking in autonomous vehicles through intersections by up to 75.35%, minimizing fuel consumption and noise pollution.
- Implemented and analyzed DBSCAN and K-means machine learning self-drive algorithms for reliability.
- Built a simulation in GazelleSim for testing our autonomous intersection control in a controlled environment.

## NSF REU Intern - Disinformation Detection and Analytics

June-Aug 2023

Old Dominion University, advised by Dr. Jian Wu  
Lab for Applied Machine Learning and Natural Language Processing Systems

- Engineered prompts and tuned hyperparameters with the OpenAI API for scientific claim verification.
- Increased the size of our project corpus by over 200% to improve benchmarking the effectiveness of the GPT-3.5-turbo model's ability to generalize across multiple scientific news domains.
- Calculated the precision, recall, and F1 score on zero-shot classification with the GPT-3.5-turbo model against our dataset on two sub-tasks: stance labeling and identifying sentence rationales.

## SELECTED TECHNOLOGIES

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### Programming Languages

Python, R, Bash, C++, MATLAB

### Libraries & Frameworks

PyTorch, OpenCV, SPM, FreeSurfer, NiBabel, Nilearn, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn

## AWARDS

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NSF CISE REU Travel Grant – \$1,200	May 2025
Research Profile Highlight – Old Dominion University College of Sciences Newsletter	Nov 2024
College of Sciences Dean's List – Old Dominion University	Dec 2023-May 2025
BIO, GEO, CISE and OCE REU Travel Grant – \$1,200	Sept 2023
Academic Excellence Award – Tidewater Community College	April 2020, Mar 2023

## SERVICE & MEMBERSHIPS

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Congressional App Challenge (CAC), <i>Vision Lab Exhibitor</i>	Dec 2024
Intelligent Ground Vehicle Competition (IGVC), <i>Surveyor</i>	Jun 2024
Institute of Electrical and Electronics Engineers (IEEE), <i>Student Member</i>	Jun 2024-Present
Association for Computing Machinery (ACM) Group at ODU, <i>Member</i>	Jan 2024-Present

## ADDITIONAL EXPERIENCE

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### Junior Web Developer

Dec 2021-June 2022

Hard to Find Party Supplies