

# Michael Evans

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## EDUCATION

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### Old Dominion University

M.S. in Computer Science, B.S. in Computer Science  
GPA: 3.95/4.00

Expected May 2027, May 2025

### Tidewater Community College

A.S. in Computer Science, A.S. in Business Administration  
GPA: 3.96/4.00

May 2023, May 2019

## PUBLICATIONS

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### Peer-Reviewed Papers

**C2.** M. 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. 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. 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. Evans, A. Temtam, H. Okhravi, and K. M. Iftekharuddin. Machine Learning-Enhanced Non-Amnesic Alzheimer's Disease Diagnosis From MRI and Clinical Features. *Brain (target)* 2025.

## TALKS

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

IEEE International Conference on Electro/Information Technology, Valparaiso 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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### Research Assistant

ODU Vision Lab, advised by Dr. Khan Iftekharuddin

Sept 2024-Present

- 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 target identification 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 Dr. Chung and Dr. 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.
- Created machine learning self-drive algorithms with DBSCAN, K-means, ROS, OpenCV, and Scikit-learn.
- Built a simulation using GazelleSim for autonomous intersection control testing 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

- Conducted prompt engineering and hyperparameter tuning with the OpenAI API on scientific claim verification with Python.
- 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 to 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.

## PROFESSIONAL EXPERIENCE

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**Junior Web Developer** Dec 2021-June 2022  
 Hard to Find Party Supplies

- Optimized legacy inventory processes with the use of Cron Jobs to save 30 minutes of work time per week.
- Maintained \$1m/year eCommerce platform by performing server maintenance, writing documentation, designing web page features, managing Google AD campaigns and updating inventory of 35,000 products.
- Ported XML web page modifications from PHP to TWIG during a full server rework with the MVC design pattern.

## SELECTED TECHNOLOGIES

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**Programming Languages**  
 Python, C++, MATLAB, PHP, JavaScript, GDScript

**Libraries & Frameworks**  
 PyTorch, OpenCV, ROS, Scikit-learn, Pandas, NumPy, Matplotlib, Nilearn, React, Express

## 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 Group at ODU, <i>Member</i>	Jan 2024-Present
STEM Day Expo, Wilson High School, <i>Volunteer Exhibitor</i>	Mar 2019
National Mathematics Honor Society at TCC (MAΘ), <i>Member</i>	Feb 2019-Present