Michael Evans

mevansci.github.io



J (757) 236-1257

EDUCATION

Old Dominion University

 ${\rm M.S.}$ in Computer Engineering, B.S. in Computer Science

May 2027*, May 2025

GPA: 3.95/4.00

Tidewater Community College

A.S. in Computer Science, A.S. in Business Administration

May 2023, May 2019

GPA: 3.96/4.00

*Expected

PUBLICATIONS

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

TALKS

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

Research Assistant

Sept 2024-Present

Vision Lab, advised by Dr. Khan Iftekharuddin

• 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 Lawrence Tech and Michigan State University, advised by Dr. Chung and Dr. Siegel Computer Science & Artificial Intelligence Robotics Lab

May-July 2024

- 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.

PROFESSIONAL EXPERIENCE

Junior Web Developer

Hard to Find Party Supplies

Dec 2021-June 2022

- 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 modifications from PHP to TWIG during a full server rework with the MVC design pattern.

SELECTED TECHNOLOGIES

Programming Languages

Python, C++, MATLAB, PHP, JavaScript, GDScript

Libraries & Frameworks

PyTorch, OpenCV, ROS, Scikit-learn, Pandas, NumPy, Matplotlib, Nilearn, React, Express

AWARDS

NSF CISE REU Travel Grant – \$1,200 Research Profile Highlight – Old Dominion University College of Sciences Newsletter College of Sciences Dean's List – Old Dominion University BIO, GEO, CISE and OCE REU Travel Grant – \$1,200 Academic Excellence Award – Tidewater Community College

May 2025 Nov 2024 Dec 2023-May 2025 Sept 2023 April 2020, Mar 2023

SERVICE & MEMBERSHIPS

Congressional App Challenge (CAC), Vision Lab Exhibitor Intelligent Ground Vehicle Competition (IGVC), Surveyor Institute of Electrical and Electronics Engineers (IEEE), Student Member Association for Computing Machinery Group at ODU, Member STEM Day Expo, Wilson High School, Volunteer Exhibitor National Mathematics Honor Society at TCC (MA Θ), Member

Dec 2024 Jun 2024 Jun 2024-Present Jan 2024-Present Mar 2019 Feb 2019-Present