

# Stephen Scarano

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## EDUCATION

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**University of Massachusetts, Amherst | Amherst, MA**

**M.S. in Computer Science / GPA: 3.9/4.0**

**January 2022 - December 2023**

- **Courses:** Intelligent Visual Computing, Neural Networks, Reinforcement Learning, Computer Vision, Optimization, Probabilistic Graphical Models, Algorithms for Data Science

**B.S. in Computer Science / GPA: 3.8/4.0**

**September 2018 - December 2021**

- **Courses:** Abstract Algebra, Linear Algebra, AI, Algorithms, Data Structures

## RESEARCH EXPERIENCE

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**Noblis Autonomy Lab | Reston, VA**

**Aug. 2024 - Present**

*Computer Vision / Machine Learning Specialist*

Computer vision for multi-agent autonomous systems. Collaboration with US DOT and NASA Artemis. Event-based vision for space-based situational awareness.

**Vision Lab | Amherst, MA**

**May 2021 - December. 2023**

*Graduate Research Assistant*

Rigorously tested optical flow dataset in crowded scenes for egomotion estimation

**Socially-Intelligent Media & Systems Lab | Amherst, MA**

**May 2020 - December. 2023**

*Graduate Research Assistant*

Data mining and deep inference of social media polling profiles for demographic criteria, later used to post-stratify results for representative outcomes

[\(see live outcomes\)](#)

**Massachusetts Institute of Technology | Cambridge, MA**

**May 2019 - September. 2019**

*Data Science Intern*

Developed data science scripts for visualization of oceanic and atmospheric indicators.

## TEACHING EXPERIENCE

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**Graduate Teaching Assistant | University of Massachusetts, Amherst**

**Sept. 2021 - December 2023**

- Assisted **Responsible AI, Introduction to Systems, and Introduction to Computation**
- Received *Outstanding TA Award*

**Computer Science Workshop | Charlemont Highschool**

**December 2021 - December 2022**

- Introduced Python programming via weekly game and machine learning projects for highschoolers

## PUBLICATIONS

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**Robust Frame-to-Frame Camera Rotation Estimation in Crowded Scenes**

Fabien Delattre, David Dirnfeld, Pha Nguyen, **Stephen Scarano**, Michael J. Jones, Pedro Miraldo and Erik G. Learned-Miller

2023 IEEE/CVF International Conference on Computer Vision (ICCV) (2023):  
9718-9728.

## **Analyzing Support for U.S. Presidential Candidates in Twitter Polls.**

**Stephen Scarano**, Vijayalakshmi Vasudevan, Mattia Samory, JungHwan Yang,  
and Przemyslaw Grabowicz

2024 *Journal of Quantitative Description: Digital Media*, 4.

## **Election Polls on Social Media: Prevalence, Biases, and Voter Fraud Beliefs.**

**Stephen Scarano**, Vijayalakshmi Vasudevan, Mattia Samory, Kai-Cheng Yang,  
JungHwan Yang, and Przemyslaw Grabowicz

*Proceedings of the International AAAI Conference on Web and Social Media*, 19(1),  
1771-1785.

\* Best Paper Finalist

## **PUBLICATIONS (UPCOMING)**

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### **Intersection Safety Systems: Classification and Prediction Across Different Road Users and Conditions**

Stephen Scarano, Anand Seshadri  
ASCE ICTD 2026

### **Multi-Tag Visual Localization and Gripper-Based Autonomous Package Retrieval**

Arav Singh, Tony Gurney, Mohammad Goli, **Stephen Scarano**

## **AWARDS**

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Best Paper Finalist (ICWSM) · Data Science for the Common Good Fellowship (Center for Data Science) · Bay State Fellowship (UMass Amherst)

## **TECHNICAL SKILLS**

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Python, ROS, C++, C, Java, JavaScript, CUDA, MavSDK, Video Editing & Presentation