Ethan Villalovoz

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Research Interests

Interactive robot learning, human-AI collaboration, and alignment, developing autonomous systems that efficiently learn human objectives, infer shared task representations, and ensure behavior aligns with human expectations through probabilistic and cognitive modeling.

Education

2026–2027 **Georgia Institute of Technology, College of Computing**, Atlanta, Georgia USA
GPA 4.0 M.S. in Computer Science, Specialization in Computational Perception and Robotics

2021–2025 **Washington State University, Honors College**, Pullman, Washington USA
GPA 3.94 B.S. in Computer Science, Minor in Mathematics with Summa Cum Laude
Senior Design Project: Retrieval-Augmented Generation (RAG) using Knowledge Graphs and Vector Search

Honors & Awards

2023 **CS Research Mentorship Program Scholar, Google Research**
Accepted to a three-month program that matches students with Google mentors and peers to support their pursuit of computer science research pathways.

2023 **Generation Google Scholarship**
Awarded based on the strength of each candidate's commitment to diversity, equity, and inclusion, demonstrated leadership, and academic performance.

2023 **National Institute of Health Fellowship - MARC**
NIH-funded opportunity for undergraduate students from underrepresented backgrounds to embark on a two-year scientific research program, leadership development, and graduate-school preparation.

2021 **National Institute of Health Fellowship - ESTEEMED MIRA**
NIH-funded unique opportunity for undergraduate students from underrepresented groups planning to major in biomedical science and engineering fields.

Conference Publications

[1] **Social Triangles and Aggressive Lines: Multi-Robot Formations Impact Navigation and Approach**
A. Bacula, **E. Villalovoz**, D. Flynn, A. Mehta, H. Knight
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2023

Professional Experiences

Summer 2026 **Microsoft**, Redmond, Washington USA
Software Engineer Intern, Advised by TBA
Commerce and Ecosystems.

Summer 2025 **Meta & Major League Hacking**, Remote USA
Production Engineering Fellow, Advised by Alexandre Maciel, Kush Desai
Built and deployed a production-grade full-stack Flask application with Docker, CI/CD automation, and monitoring infrastructure, improving deployment efficiency, scalability, and reliability in real-world production environments.

Summer 2024 **Carnegie Mellon University**, Pittsburgh, Pennsylvania USA
Robotics Institute Summer Scholar, Advised by Henny Admoni
Developed a hierarchical reward learning framework with Bayesian inference and interactive clarification dialogues, enhancing robot adaptability and task accuracy in human-robot collaboration research.

Summer 2023 **Google**, Sunnyvale, California USA
Software Engineering Intern (STEP), Advised by Arun Tej Chennadi, Paul Valdez
Developed scalable C++ and SQL analytics pipelines and interactive dashboards that optimized internal data workflows, reduced runtime by 66%, and enhanced real-time decision-making across engineering teams.

Summer 2022 **Oregon State University**, Corvallis, Oregon USA
REU Fellow, Advised by Heather Knight
Designed and implemented geometric motion primitives and interactive deployment tools enabling expressive multi-robot behaviors for human-robot interaction research.

Teaching

Spring 2025 **CPT_S 315: Introduction to Data Mining** WSU
Undergraduate Teaching Assistant

Fall 2024 **CPT_S 350: Design and Analysis of Algorithms** WSU
Undergraduate Teaching Assistant

Fall 2023 **CPT_S 355: Programming Language Design** WSU
Undergraduate Teaching Assistant

Fall 2022 **CPT_S 121: Program Design and Development C/C++** WSU
Undergraduate Teaching Assistant

Outreach

Summer 2025 **WSU MARC & MIRA Program** WSU
Alumni Speaker and Mentor
Invited to present to undergraduate researchers about the graduate school application process. Shared personal experiences, strategies for overcoming rejections, and actionable advice for pursuing research opportunities.

2022–2024 **WSU VCEA** WSU
Voiland College Ambassador
Represented and connected Voiland College with industry, alumni, and prospective students, sharing unique experiences and perspectives to promote the college's mission and transformative impact.

Summer 2024 **CMU RISS RoboLaunch** CMU
Website Coordinator
An initiative to explore the world of robotics through a series of talks and interactive workshops. Responsible for updating the website to ensure accessibility and provide up-to-date information.

2021–2023 **WSU Responsibility Opportunity Advocacy Respect (ROAR)** WSU
Peer Ally
Collaborated with ROAR students by providing support in attending classes, facilitating social integration, participating in university events, and fostering inclusive experiences.