Ethan Villalovoz

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Contact

Georgia Institute of Technology
Sacramento, California, United States

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Links: Website, LinkedIn, Google Scholar

Education

Georgia Institute of Technology **Jan 2026 – Dec 2027**
M.S. in Computer Science, Computational Perception and Robotics GPA: 4.0/4.0

Washington State University **Aug 2021 – May 2025**
B.S. in Computer Science, Minor in Mathematics GPA: 3.94/4.0
Senior Design Project: Retrieval-Augmented Generation Using Knowledge Graph and Vector Search

Experience

Georgia Institute of Technology, Atlanta, Georgia, United States **Feb 2026 – Present**
Graduate Student Researcher, Advised by Animesh Garg
Robotics.

Microsoft, Redmond, Washington, United States **May 2026 – Jul 2026**
Software Engineer Intern, Advised by TBA
Commerce and Ecosystems.

Washington State University, Pullman, Washington, United States **Jan 2024 – May 2025**
Undergraduate Research Assistant, Advised by Janardhan Rao (Jana) Doppa
Designed and evaluated a Bayesian optimization framework for prompt-based LLM code generation, improving sample-efficient functional correctness.

Carnegie Mellon University, Pittsburgh, Pennsylvania, United States **Jun 2024 – Aug 2024**
Robotics Institute Summer Scholar, Advised by Henny Admoni
Designed and implemented a hierarchical reward learning framework with Bayesian inference and clarification dialogues, enabling adaptive robot behavior in human-robot interaction.

Google, Sunnyvale, California, United States **May 2023 – Aug 2023**
Software Engineering Intern (STEP), Advised by Arun Tej Chennadi, Paul Valdez
Designed and implemented scalable C++ and SQL analytics pipelines with interactive dashboards, enabling efficient internal data workflows.

Oregon State University, Corvallis, Oregon, United States **Jun 2022 – Aug 2022**
NSF 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.

Awards & Honors

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

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

NIH MARC Scholar - National Institutes of Health (T34) 2023 – 2025
NIH-funded opportunity for undergraduate students from underrepresented backgrounds to embark on a two-year scientific research program, leadership development, and graduate-school preparation.

Pre-Prints

[P1] **An Exploratory Study of Bayesian Prompt Optimization for Test-Driven Code Generation with Large Language Models**.
S. Tomar, A. Deshwal, E. Villalovoz, M. Fazzini, H. Cai, J.R. Doppa.
arXiv, 2025.

Conference Publications

[C1] **Social Triangles and Aggressive Lines: Multi-Robot Formations Impact Navigation and Approach**.
A. Bacula, E. Villalovoz, D. Flynn, A. Mehta, H. Knight.
International Conference on Intelligent Robots and Systems (IROS), 2023.

Teaching

CPT_S 315: Introduction to Data Mining Spring 2025
Undergraduate Teaching Assistant, Washington State University

CPT_S 350: Design and Analysis of Algorithms Fall 2024
Undergraduate Teaching Assistant, Washington State University

CPT_S 355: Programming Language Design Fall 2023
Undergraduate Teaching Assistant, Washington State University

CPT_S 121: Program Design and Development C/C++ Fall 2022
Undergraduate Teaching Assistant, Washington State University

Outreach

WSU MARC & MIRA Program (Invited Talk) 2025
Invited to present to undergraduate researchers about the graduate school application process. Shared personal experiences and actionable advice for pursuing research opportunities.

WSU VCEA (College Ambassador) 2022 – 2024
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.

CMU RISS RoboLaunch (Website Coordinator) 2024
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.