Sankalp (Sunny) Agrawal

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RESEARCH INTERESTS

My research interests focus on developing robotic systems that operate with minimal human intervention, driving greater autonomy and automation in everyday environments. I am particularly interested in Reinforcement Learning (RL) methods that enable robots to learn and adapt in human-like ways. My long-term goal is in creating systems that demonstrate robust adaptability and human-like decision-making with minimal reliance on external supervision.

EDUCATION

The Ohio State University, Columbus OH. Aug 2022 – Dec 2025
B.S. in Electrical Engineering (Advisor: Ayonga Hereid) *GPA: 4.0 / 4.0*
Minors: Robotics and Autonomous Systems, Physics

RESEARCH & PROFESSIONAL EXPERIENCE

Interactive and Trustworthy Robotics Lab, Carnegie Mellon Univ. May 2025 – Present
Visiting Researcher with Andrea Bajcsy
- Robotics Institute Summer Scholars (RISS) Program
- World models for generalizable constraint-conditioned latent safety analysis.

Learning & Interactive Robot Autonomy Lab, USC May 2024 – August 2025
Visiting Researcher with Erdem Bıyık
- Amazon Summer Undergraduate Research Experience (SURE) Fellowship
- Meta-reinforcement learning for Bayes-Adaptive RL methods.

Cyberbotics Lab, The Ohio State University September 2022 – Present
Undergraduate Research Assistant with Ayonga Hereid
- Reinforcement learning for humanoid robot locomotion and navigation.

Bilstein thyssenkrupp, Hamilton, OH May 2022 – August 2022
Industrial Robotics Intern
- Automated processes at Bilstein's shock absorber plant with Universal Robots (UR) 6-axis, robot manipulators, vision systems and network communication.

PUBLICATIONS

[1] **S. Agrawal***, J. Seo*, K. Nakamura, R. Tian, and A. Bajcsy, 'AnySafe: Adapting Latent Safety Filters at Runtime via Safety Constraint Parameterization in the Latent Space', *In Submission to ICRA 2026*, https://arxiv.org/abs/2509.19555, 2025.

[2] C. Peng, Z. Zhang, S. Gong, **S. Agrawal**, K. A. Redmill, and A. Hereid, 'Reinforcement Learning with Data Bootstrapping for Dynamic Subgoal Pursuit in Humanoid Robot Navigation', *In Submission to ICRA 2026*, https://arxiv.org/abs/2506.02206, 2025.

TEACHING

The Ohio State University
ECE/ME 5463: Introduction to Real Time Robotics Systems Spring 2024

Mathematics and Statistics Learning Center, OSU January 2023 – April 2024
Math Tutor
- Tutored other OSU students in Linear Algebra and Differential Equations.
- Learned to effectively communicate and explain complex ideas.

CLUBS & ACTIVITIES

Black x Bold Magazine, *Photographer* August 2023 – Present
- Highlighting multicultural clubs on campus through passion for photography.
- Uplifting voices and spreading awareness on campus.
- Improved website and recruitment efforts to boost outreach.

Buckeye Capture, *Founder* January 2024 – Present
- Offering free professional photography service to Ohio State clubs to help with branding and outreach.

REFERENCES

Dr. Andrea Bajcsy, (abajcsy@cmu.edu) Research Advisor, Carnegie Mellon University
Dr. Erdem Bıyık, (biyik@usc.edu) Research Advisor, University of Southern California
Dr. Ayonga Hereid, (hereid.1@osu.edu) Research Advisor, The Ohio State University