

# Dayi Ethan Dong

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## EDUCATION

### University of California Berkeley, Berkeley, CA

August, 2024 – Present

Ph.D., Mechanical Engineering

- Advisor: Dr. Negar Mehr
- Researching generative modeling to generate trajectories for robotic coordination.
- Focusing on real-time adaptability: conditioning learned models to support closed-loop replanning in new and multi-agent environments

### Yale University, New Haven, CT

August, 2020 – May, 2024

B.S., Major(s): Engineering Sciences (Mechanical) – with Distinction, Computer Science – with Distinction

- Magna Cum Laude
- Cumulative GPA: 3.95; Major GPA: 3.99
- Relevant Coursework: Robot Learning; Introduction to Embedded Robotic Systems; Introduction to Robotics, Control, and Learning; Automated Decision Systems; Artificial Intelligence; Intelligent Robotics; Applied Planning and Optimization

## TECHNICAL SKILLS

- Programming Languages: Python, C, Java, ROS, ROS2
- Software: Solidworks, Fusion 360
- Languages: English (Native), Mandarin (Fluent), Spanish (Basic)

## RESEARCH EXPERIENCE

### Honda Research Institute, Mountain View, CA

Sep, 2025 – Dec, 2025

*Robotics Software Engineering Intern*

- Worked on developing improvements to autonomous driving algorithms under Dr. David Isele

### Yale University, Intelligent Autonomy Lab, New Haven, CT

November, 2021 – May, 2024

*Undergraduate Research Assistant*

- Conducted research on multi-agent robotic experiments and validating algorithms for search and exploration under Dr. Ian Abraham
- Collaborated with undergraduate students, graduate students, and other senior researchers on work related to ergodic search

### Carnegie Mellon University, Biorobotics Lab, Pittsburgh, PA

May, 2023 – August, 2023

*Undergraduate Research Assistant*

- Carnegie Mellon University's Robotics Institute for Summer Scholars (RISS) program
- Researched ergodic search and modular robotics under Dr. Howie Choset

## PUBLICATIONS AND PRESENTATIONS

- **D. Dong**, M. Bhatt, S. Choi, N. Mehr, “MIMIC-D: Multi-modal Imitation for Multi-agent Coordination with Decentralized Diffusion Policies,” *Pending Review*, <https://arxiv.org/abs/2509.14159>
- K. Nagpal, **D. Dong**, J.B. Bouvier, N. Mehr, “Leveraging Large Language Models for Effective and Explainable Multi-Agent Credit Assignment,” in 2025 *Autonomous Agents and Multiagent Systems (AAMAS)*, <https://arxiv.org/abs/2502.16863>
  - Publication
- **D. Dong**, A. Xu, G. Gutow, H. Choset I. Abraham, “Ergodic Exploration over Meshable Surfaces,” in 2025 *International Conference on Robotics and Automation (ICRA)*, <https://arxiv.org/abs/2503.05026>
  - Publication
  - Poster presentation

- Oral presentation
- **D. Dong**, H. Berger, I. Abraham, “Time Optimal Ergodic Search: Multiscale Coverage in Minimum Time,” in *International Journal of Robotics Research*, doi.org/10.1177/02783649241273597
  - Publication
  - Journal extension of previous work
- **D. Dong**, H. Berger, I. Abraham, “Time Optimal Ergodic Search,” in *2023 Robotics: Science and Systems (RSS)*, arxiv.org/abs/2305.11643.
  - **Best Paper Award**
  - Publication
  - Poster presentation
  - Spotlight talk
- C. Lerch, **D. Dong**, I. Abraham, “Safety-Critical Ergodic Exploration in Cluttered Environments via Control Barrier Functions,” in *2023 International Conference on Robotics and Automation (ICRA)*, arxiv.org/abs/2211.04310.
  - Publication
  - Poster presentation

## LEADERSHIP/WORK EXPERIENCE

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<b>FIRST Robotics Competition Team 5419 Berkelium</b> , <i>Mentor</i> , Berkeley, CA	September, 2024 – Present
• Worked with the high school robotics team to help them throughout their competition and off season	
<b>IEEE Robotics and Automation Society</b> , <i>Student Representative</i> , Virtual	April, 2024 – Present
• Multi-Robot System Technical Committee	
• Coordinated with the Chair and Co-Chairs to organize committee events like meetings, workshops	
• Facilitated communication between members and students around the world	
• Represented the student perspective within the committee	
<b>Independent</b> , <i>Academic Tutor</i> , Virtual	November, 2023 – Present
• Tutored high-school students one-on-one in standardized tests (ACT, SAT)	
• Coordinated directly with parents to help keep students on track and best prepared for their exams and school	
<b>Paschar Consulting</b> , <i>College Application Mentor</i> , Virtual	August, 2022 – Present
• Guided high school juniors and seniors through the US college application process by helping them create an application that best reflects their motivations, accomplishments, and ambitions	
<b>Alexander Academy/Ivy Tutors</b> , <i>Academic Tutor</i> , Virtual	March, 2021 – November, 2023
• Tutored high-school students one-on-one in standardized tests (ACT, SAT) and academic subjects (Physics, Calculus)	
• Created an online, recorded curriculum for students and tutors to use as a resource	
<b>Yale Code Haven</b> , <i>Treasurer, Classroom Lead, Mentor</i> , New Haven, CT	August, 2020 – May, 2023
• Managed finances and purchases for the organization while coordinating with Yale financial offices	
• Planned large interactive events for middle-school students and educators	
• Led a class of peer mentors to teach middle-school students Computer Science	
<b>HONORS AND AWARDS</b>	
• Best Paper Award (Robotics: Science and Systems 2023)	
• 2024 Honorable Mention for Computing Research Association's Outstanding Undergraduate Researcher Award	
• Donald Warren McCroskey Memorial Prize <ul style="list-style-type: none"> <li>○ Awarded to a senior who is deserving of the greatest distinction for scholarly achievement in fields related to mechanics and its applications</li> </ul>	

- 2020 U.S. Presidential Scholar

## **GRANTS AND FELLOWSHIPS**

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- National Defense Science and Engineering Graduate (NDSEG) Fellowship Award [Offered]
- Berkeley Fellowship
- Society of American Military Engineers Gift Fund for Scholarships
- Dr. Claire A. Colman Scholarship Fund
- Morton Butler Ryerson Memorial Scholarship Fund
- Robert B. Dodds (M.S.E.E. 1928) Scholarship Fund
- Dean's Research Fellowship
- Yale Summer Experience Award

## **SOCIETIES**

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- Phi Beta Kappa Honor Society
- Tau Beta Pi Engineering Honor Society
- IEEE Membership
- IEEE Robotics and Automation Society Membership
- ASME Membership