

# Dayi Ethan Dong

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## EDUCATION

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**University of California Berkeley**, Berkeley, CA August, 2024 – Present

Ph.D., Mechanical Engineering

- Advisor: Dr. Negar Mehr

**Yale University**, New Haven, CT August, 2020 – May, 2024

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

- 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

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

## RESEARCH EXPERIENCE

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**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
- Project: "Ergodic Search over Meshable Surfaces"
  - Working paper draft of future conference paper submission
  - Poster and poster presentation for RISS

**Yale University**, *Intelligent Autonomy Lab*, New Haven, CT November, 2021 – Present

*Undergraduate Research Assistant*

- Conducted research on multi-agent robotic experiments and validating algorithms for search and exploration under Dr. Ian Abraham
- Project: "Safety-Critical Ergodic Exploration in Cluttered Environments via Control Barrier Functions"
- Project: "Time Optimal Ergodic Search"
  - Best Paper Award at the 2023 Robotics: Science and Systems conference
- Collaborated with undergraduate students, graduate students, and other senior researchers on work related to ergodic search

## PUBLICATIONS AND PRESENTATIONS

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- 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](https://arxiv.org/abs/2211.04310).
  - Publication
  - Poster presentation
- **D. Dong**, H. Berger, I. Abraham, "Time Optimal Ergodic Search," in *2023 Robotics: Science and Systems (RSS)*, [arxiv.org/abs/2305.11643](https://arxiv.org/abs/2305.11643).
  - **Best Paper Award**
  - Publication
  - Journal Paper (pending acceptance)
  - Poster presentation
  - Spotlight talk

## LEADERSHIP/WORK EXPERIENCE

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**Yale Code Haven, Treasurer, Classroom Lead, Mentor, 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

**Alexander Academy/Ivy Tutors, Academic Tutor, 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

**Paschar Consulting, College Application Mentor, 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

**IEEE Robotics and Automation Society, Student Representative, 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

## HONORS AND AWARDS

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- 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
  - Awarded to a senior who is deserving of the greatest distinction for scholarly achievement in fields related to mechanics and its applications
- 2020 U.S. Presidential Scholar

## GRANTS AND FELLOWSHIPS

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- University of California Berkeley First Year 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