Dayi Ethan Dong

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EDUCATION

Yale University, New Haven, CT; Class of 2024
- B.S. Engineering Sciences (Mechanical) and B.S. Computer Science; Cumulative GPA: 3.94; Major GPA: 3.99
- CPSC 223: Data Structures & Programming Techniques, CPSC 323: Introduction to Systems Programming and Computer Organization, ENAS 194: Ordinary and Partial Differential Equations with Applications, CPSC 365: Algorithms, CPSC 327: Object-Oriented Programming, MENG 361: Fluid Mechanics, MENG 443: Introduction to Robotics, Control, and Learning

Madison West High School, Madison, WI; Class of 2020
- Cumulative GPA 4.00
- 2020 US Presidential Scholar, National Merit Finalist, Dean's List Semifinalist (FIRST Robotics), National AP Scholar, All American Academic, All American Swimming, Scholar-Athlete Recognition, Wisconsin Academic Excellence Scholar

University of Wisconsin Madison, Madison, WI; Dual Enrollment during high school
- Cumulative GPA 4.00
- Math 234: Calculus – Functions of Several Variables, Math 340: Elementary Matrix and Linear Algebra, Computer Science 300: Programming II

RESEARCH EXPERIENCE

Carnegie Mellon University Robotics Institute, *Student Researcher,* Pittsburgh, PA, 2023
- Attended and sponsored through the RISS program
- Conducted research in Professor Howie Choset's BioRobotics Lab on ergodic search and modular robotics

Yale University School of Engineering and Applied Science, *Student Researcher,* New Haven, CT, 2022-Present
- Conducted research in Professor Ian Abraham's Intelligent Autonomy Lab on multi-agent robotic experiments and validating algorithms for safe active search and exploration
  - "Safety-Critical Ergodic Exploration in Cluttered Environments via Control Barrier Functions" paper was accepted to International Conference on Robotics and Automation 2023 as second author
  - "Time Optimal Ergodic Search" paper was accepted to the 2023 Robotics: Science and Systems conference as first author
- Collaborated with undergraduate students, graduate students, and other senior researchers on work related to safe, ergodic exploration

UW Madison Mechanical Engineering, *Research Intern*, Madison, WI, 2019
- Redesigned, programmed, tested, and analyzed a rimless-wheel robot to understand energy efficiencies of hip-driven walking versus ankle-driven walking

WORK EXPERIENCE

Paschar Consulting, *College Application Mentor,* Virtual, 2022-Present
- Guided high school juniors and seniors through the college application process by helping them create an application that best reflects their motivations, accomplishments, and ambitions

Ringle, *English Tutor,* Virtual, 2022
- Worked with Korean professionals and students to help improve their spoken and written English fluency

Alexander Academy, *Academic Tutor,* Atlanta, GA, 2021-Present
- Tutored high school students one-on-one in standardized tests (ACT, SAT)
- Created an online, recorded curriculum for students to utilize as a study resource

Birdwell Solutions, *Intern,* Madison, WI, 2020/2021
- Helped with front-end and back-end development on their mobile app
- Researched and logged data for clients
- Wrote technical documentation for clients' projects

West High School, *Academic Tutor/Planner*, Madison, WI, 2020
- Assisted high-school students facing academic difficulties because of the COVID-19 pandemic
- Planned and created learning resources directed towards first generation low-income students

UniMatch, *Data Analyst & Marketing Coordinator,* International, 2020
- Worked on a start-up with other high-school and undergraduate students to design a system to match students with

their best-fit college

Hill Farm Swim Club, *Lifeguard,* Madison, WI, 2019/2020
- Guarded the pool, taught swim lessons to young swimmers, opened and closed the pool

VOLUNTEER/LEADERSHIP EXPERIENCE

Code Haven, *Treasurer, Events Director, & Classroom Lead,* New Haven, CT, 2020-Present
- Managed finances and purchases
- Planned large interactive events for middle school students and educators
- Led a class of mentors to teach middle-school students Computer Science

FRC BadgerBOTS, *President*, Madison, WI, 2018-2020
- Led robot design, robot build, CAD, finances, match strategy, drive coach, team meetings, and logistics
- Led team to "Gracious Professionalism" Award by helping rookie teams from China and Minnesota finish their robots
- Organized a small team to attend the National Advocacy Conference in Washington DC for the first time
- Assisted the establishment of the first FRC teams in Venezuela and Ukraine

Study Llama, *Tutor,* Online, International, 2020
- Tutored and helped students with ACT, SAT, SAT II, AP, and college admissions

Peer Tutoring, *Peer Tutor,* Madison, WI, 2017-2020
- Helped other students in my high school with various math and science classes

BadgerBOTS Robotics, *Volunteer/Event Coordinator,* Madison, WI, 2017-2020
- Volunteered at different outreach and science night events, helped out at regional FIRST Lego League events, managed various aspects of regional events

SKILLS

- **Computer Programing**: Python, C, Java, C++
- **Foreign Language**: English, Chinese – Mandarin (Fluent), Spanish (Basic)