

# Ethan Dong

Aspiring Robotics Engineer, Pursuing Bachelors of Science in Mechanical Engineering and Computer Science

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## EXPERIENCE

### **Birdwell Solutions, Madison, WI— Intern**

JUN 2020 - AUG 2020

Birdwell Solutions helps companies bring their business to the internet through a variety of mediums including app development. With them, I am currently learning front-end and back-end development on their mobile app API.

### **West High School, Madison, WI— Academic Tutor/Planner**

MAY 2020 - AUG 2020

My high-school hired me as an academic tutor to assist students facing academic difficulties as a result of the COVID-19 pandemic during the 2nd semester of the 2019-2020 school year and into summer courses. Also, helped plan and create learning resources especially directed at FGLI students.

### **UniMatch, Online, International— Data Analyst & Marketing Coordinator**

APR 2020 - SEP 2020

Working on a start-up that I helped to co-found with a group of other high-school and undergraduate age students on a website-based business designed to match students with their best-fit college. I helped organize sections of research and tactically push forward out marketing

### **Hill Farm Swim Club, Madison, WI— Lifeguard**

MAY 2019 - AUG 2020

Guarded the pool, taught swim lessons to young swimmers, opened and closed the pool

### **UW Madison Mechanical Engineering, Madison, WI— Research Intern**

MAY 2019 - SEP 2019

Redesigned, programmed, tested, and analyzed a rimless-wheel robot to understand energy efficiencies of hip-driven versus ankle-driven walking

## SKILLS

Java  
Python  
C  
Racket  
Tutoring  
JavaScript  
Eclipse  
Solidworks  
HTML/CSS  
Communication  
Public Speaking  
Time Management  
Leadership

## AWARDS

2020 U.S. Presidential Scholar  
National Merit Finalist  
Dean's List Semifinalist  
National AP Scholar  
All American Academic  
All American Swimming  
Scholar-Athlete Recognition  
Wisconsin Academic Excellence Scholar

## FRC BadgerBOTS, Madison, WI— *President*

JUN 2018 - AUG 2020

- ❖ Set up robotics club at high school and organized recruiting events
- ❖ Increased funds from \$20,000 to \$45,000
- ❖ Led robot design, robot build, CAD, finances, match strategy, drive coach, team meetings, competition travel
- ❖ Led team to “Gracious Professionalism” Award by helping rookie teams from China and Minnesota finish their robot at competition
- ❖ Organized 5-person team to attend National Advocacy Conference in Washington DC for the first time in our team’s history
- ❖ Brought advocacy efforts to Wisconsin to double DPI grant money
- ❖ Organized team at outreach events like Madison and Milwaukee Maker Faire, Project Boolean, Science Nights, Girl Scout Troops
- ❖ Assisted establishment of first FRC teams in Venezuela and Ukraine

## LANGUAGES

English

Chinese (Mandarin)

Spanish

## CERTIFICATIONS

American Red Cross  
Lifeguard

## EDUCATION

### Yale University, New Haven, CT— *Bachelor of Science (3.93)*

SEP 2020 - MAY 2024

B.S. Engineering Sciences (Mechanical) and B.S. Computer Science

- ❖ CPSC 201: Introduction to Computer Science
- ❖ CPSC 223: Data Structures & Programming Techniques

### UW Madison, Madison, WI— *Dual Enrollment (4.0)*

JUN 2018 - MAY 2020

Took classes during the school year and over summer while in high school

- ❖ Math 234: Calculus - Functions of Several Variables
- ❖ Math 340: Elementary Matrix and Linear Algebra
- ❖ Computer Science 300: Programming II

### West High School, Madison, WI— *High School Diploma (4.0)*

SEP 2016 - JUN 2020

- ❖ APs:
  - Calculus AB: 5
  - Chinese: 5
  - CS Principles: 4
  - Biology: 4
  - Calculus BC: 5
  - Microeconomics: 5
  - Chemistry: 5
  - CS A: 5
  - Physics 1: 5
  - Physics 2: 5
  - Physics C Mech: 5
  - Statistics: 5
- ❖ ACT: 36
- ❖ SAT: 1550 Single, 1570 Super
- ❖ PSAT: 1510

- ❖ SAT Subject
  - Physics: 800
  - Math II: 800
  - Chemistry: 790

## LEADERSHIP

### **Code Haven — *Treasurer & Classroom Lead***

SEP 2020 - PRESENT

Manage the organization's funds by applying for funding and grants as well as keeping track of expenses and reimbursements. Also, lead a class of college mentors to teach Computer Science to elementary and middle school students.

### **FRC BadgerBOTS — *President/Outreach Coordinator***

APR 2018 - PRESENT

Led the only FIRST Robotics Competition team in the greater Madison area for the 2019 and 2020 season. Organized the “build season” and competition logistics, planned summer classes, recruited members from 4 school districts.

### **Robotics Club — *Founder***

SEP 2018 - JUN 2020

Robotics Club at high school to foster interest in FIRST and VEX robotics.

### **Science Bowl Club — *Co-founder***

SEP 2018 - JUN 2020

A team that competes in the National Science Bowl.

## VOLUNTEER

### **StudyLlama — *Tutor***

MAY 2020 - PRESENT

Tutoring and helping students all over the world through a digital medium with ACT, SAT, SAT II, AP tests, and the college admissions process.

### **Leo Club — *Volunteer***

SEP 2016 - JUN 2018

Preparing and serving food for the local food pantry, senior home clean-up.

### **West Men's Swim and Dive/Madison Aquatic Club — *Volunteer***

SEP 2016 - JUN 2020

Swim lessons for underprivileged kids, Ironman traffic directing, an expo for Multiple Sclerosis fundraiser demo and lessons, Dairyland games volunteer.

## **Peer Tutoring — *Student Tutor***

SEP 2017 - JUN 2020

Helping other students at high school to catch up or get ahead in various math and science classes.

## **BadgerBOTS Robotics — *Volunteer/Event Coordinator***

JUN 2017 - AUG 2020

Volunteering at different outreach and science night events, helping out at registration for FIRST Lego League, managing various aspects of the FIRST Lego League Badgerland Regional.

## **REFERENCES**

Kelly Anderle – Counselor at West High School [kaanderle@madison.k12.wi.us](mailto:kaanderle@madison.k12.wi.us)

Eric Gettrust – Physics Teacher at West High School [etgettrust@madison.k12.wi.us](mailto:etgettrust@madison.k12.wi.us)

Mark Nepper – English Teacher at West High School [mnepper@madison.k12.wi.us](mailto:mnepper@madison.k12.wi.us)

Dr. Peter Adamczyk – Professor at UW-Madison [peter.adamczyk@wisc.edu](mailto:peter.adamczyk@wisc.edu)

Nic Fouts – Mentor of FRC Team 1306 [nic.fouts@gmail.com](mailto:nic.fouts@gmail.com)