

# Robert Zhang

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## EDUCATION

**Purdue University, Engineering**, West Lafayette, IN

Aug 2023–Present

*Bachelor of Science in Electrical Engineering*

GPA: N/A

**Activities:** IEEE ROV (Software/Electrical Team), ML@Purdue (Developer, Interviewer), ARC Drone Delivery (Landing Lead), Purdue Solar Robotics (Embedded Systems), TEDxPurdueU (Salons), EPICS NKF App Developer, PIBA (Analyst), Hiking Club

## PROFESSIONAL EXPERIENCE

**Purdue SoCET (SoC Extension Technologies) Lab**, Purdue University

Jan 2024 — Present

*Student Researcher*

- Designing PCBs for tests/demos of lab-developed RISCv chips (AFTx04–AFTx07), FPGA prototyping for chip testing
- Doing EDA and open-source synthesis, layout, verification for backend design flow

**IBM Almaden Research**, Almaden, CA

June 2021 — Aug 2021

*Student Intern*

- Developed model for polymer synthesis prediction using molecular featurization techniques, created polymerization reaction optimization model using chromatogram pattern data (SMILES)
- Stanford Research: Aided professors Xibing Che and Fan Yang in mice lung tissue treatment & extraction and lab analysis

**Brown Pre-College Research**, Providence, RI

June 2022 — Aug 2022

*Student Researcher*

- Learned experimental methods to monitor cell proliferation, gene sequencing analysis, and protein tracking and expression
- Project - *The Use of Artemisinin as an Effective Treatment in Protecting and Rescuing Sympathetic Neurons from Amyloid  $\beta$ 1-42 Induced Apoptosis through Activation of the ERK1/2 pathway in the Pathogenesis of Alzheimer's Disease*

**SOMI SOMI**, Cupertino, CA

February 2023 — April 2023

*Team Member / Assistant Manager*

- Responsible for opening, closing, making ice cream, taiyaki, ahboong, communicated with team and manager smoothly

## ACTIVITIES

**Equal Access Robotics**, Palo Alto, CA

Aug 2020 — Present

*Co-Founder, VP of Outreach & Technology*

- Outreached to over 1000 students throughout seven cycles of teaching, workshops, and summer camps.
- Communicated and organized classes for rural underprivileged students in Mali through ACFA (A Child for All)

**Synopsys Championship Science Fair**, CA

Aug 2021 — March 2023

*Researcher*

- Machine Learning Approaches to Diagnosing Skin Conditions in Diverse Skin Types Using CNN & GANs ('21, '22)*
- HUGS ('23) - IC-Arduino Vest for Relieving Social-Induced Anxiety*
- 1<sup>st</sup> Award: Physical Science & Engineering (SCVSEF), 4<sup>th</sup> Award: Senior Computational Systems (CSEF)

**Paradigm VEX VRC 315R**, Cupertino, CA

July 2019 — July 2022

*Build & Design Lead, Mentor*

- World 1<sup>st</sup> Skills Rank ('21), VRC HS California Champions ('21), Division 2<sup>nd</sup> Seed VRC HS World Champs ('21)
- Volunteered and mentored at 315's annual Girl-Powered Google Robotics Workshop from 2020–2022

**Scouts Troop 57**, Palo Alto, CA

September 2012 — Present

*Eagle Scout, Mentor*

- Patrol Leader, Scribe, First-Year Guide, Troop Webmaster, Camp Counselor
- Led Eagle project to design, craft, and distribute COVID-19 essential kits to homeless shelters around the Bay Area

**Harker Jazz Band**, San Jose, CA

August 2016 — May 2022

*Saxophonist*

- Played Alto 1, Alto 2, Tenor 1, and Baritone | Invited to the 2022 Disney Imagination Tour in Los Angeles

**The Harker School**, San Jose, CA

Aug 2016 – May 2023

- Activities: Research Club, AI Club, FRC 1072, Medical Club, ITP, DECA, Ethics in Tech, TEDx, Varsity Swimming, Golf
- 1480 PSAT, 1550 SAT, NMSQT Finalist
- Presidential Service Gold Award ('20–'23), AP Scholar with Distinction ('22–'23)

## INTERESTS & SKILLS

Collaboration & Volunteering • Semiconductors • ASIC • Embedded Sys • Software Development • Entrepreneurship • Music