

Da-Yi (Thomas) Lin

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ABOUT ME

Personal Qualities – Integrity | Communication | Holistic Perspective

Team player, Dependable worker, Self-aware individual, Flexible & Decisive leader, Robotics Aficionado

Purdue University – West Lafayette, IN

Aug. 2021 – Aug. 2025

- Relevant Courses: Machine Design, Mechanics of Materials, Statics & Dynamics, Fluid Mechanics, Heat Mass Transfer, Internal Combustion Engines, Control Systems, Naval Weaponry, Architecture, Abaqus FEA, Siemens NX
- Bachelor of Mechanical Engineering, GPA 3.7

University High School – Irvine, CA

Aug. 2018 – May. 2021

- Graduated Magna Cum Laude, Weighted GPA 4.3

Language: Fluent in English & Mandarin, Beginner in Spanish & Cantonese

As a recent graduate with 9 years in competitive robotics, I specialize in robotics mechanism prototyping & CAD, as well as conducting design review and overseeing cross-functional team progress. As CTO & design lead at Charging Robotics LLC (2018-Present), I oversaw rapid prototyping & design processes for competitive robotics. At M&O Perry (2022-2024), I focused on detailing medical liquid/powder filling machines. At Purdue Forestry Research (2025), I developed a forest mapping module adaptable to backpack & UAV. I'm all about anything linear, rotary, and object handling.

ENGINEERING LEADERSHIP EXPERIENCE

Charging Robotics LLC FRC Competition Team, Irvine, CA

Sept. 2018 – Present

CTO & Strategic Design Mentor

- Directed a team of 40 to design competitive robots with rapid pick-and-placing or high-speed launching capabilities
- Managed design process and oversaw laser-cutter prototyping and CNC machining schedules and reduced TTM by 40%
- Supported aspiring engineers by providing CAD technique guidance as well as power tools and machine training
- Established a design library of linear mechanisms like multi-stage lifts, telescopic devices; rotational mechanisms like single joints, (virtual) 4-bar devices and turret; as well as roller grabbers and intakes designed for object handling
- Reviewed and monitored robotics design using SolidWorks to ensure function optimization and concept integrity

Surfrider Foundation Water Testing Newport Chapter, Irvine, CA

Aug. 2018 – May. 2021

Project Manager

- Led a group of 8 water testers to collect samples in surrounding water bodies and upload test results to the Surfrider
- Provided test data to research teams and local water board to address water quality issues more effectively

INTERNSHIP & RESEARCH EXPERIENCE

Purdue Digital Forestry Knapp Backpack & UAV Project, West Lafayette, IN

May. 2025 – Aug. 2025

Project Researcher

- Collaborated as a team of 6 to derive client requirements and generate design concepts
- Utilized SolidWorks CAD & FEA for detailing modular forest scanning systems adaptable to backpack & UAV
- Manufactured final product that is light weight, modular, and cost reduced by 75% compared to competitors in the environment mapping industry with sensors like Lidar, GPS, RGB cameras mounted for quality data

M&O Perry Industries, Corona, CA

Jun. 2022 – Apr. 2024

Hybrid Mechanical Engineering Intern

- Utilized SolidWorks CAD and various subtractive machining skills to assist in designing, detailing, and manufacturing fully automated, customized OEM powder/liquid filling machines for pharmaceutical product manufacturers
- Researched various new sensors and pumps through professional lab tests and developed optimized design implementations of the ACCOFIL® powder filling method and liquid filling method with peristaltic pumps
- Reformed company design process by implementing 3D printers and reduced company TTM by 5%

Pioneer Engineering LLC, Remote

Sept. 2022 – Jan. 2023

Part Time Mechanical Engineer

- Collaborated with OEM system integration engineers in machine design and detailing
- Created major CAD design concepts on a fully automated box formation, packaging, and sealing system

AWARDS & CLUBS

- Purdue Dean's List | Honor Roll Aug. 2021 – Aug. 2025
- 3-time FIRST Robotics Competition Regional Champion Achieved in 2021, 2022, 2024
- 4-time FIRST Robotics Competition Regional Finalist Achieved in 2020, 2023, 2024, 2025
- Certified SolidWorks Professional (CSWP) Mechanical Design Certification Received in 2020
- Purdue Electric Racing Vehicle Dynamics Member Aug. 2021 – Jan. 2022
- Purdue Robomaster Club Mechanical Design (Onshape) & Strategy Mentor Aug. 2022 – Jan. 2023