Wayne Toh

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Education

University of California, Berkeley — Berkeley, CA
Master of Engineering, Modeling and Simulations of Advanced Manufacturing — *Expected May 2026*

University of California, Berkeley — Berkeley, CA
Bachelor of Science, Mechanical Engineering CGPA:3.81 — *Graduated 2023*

Technical Skills

Engineering: 2D/3D CAD Modeling (SOLIDWORKS, AUTOCAD, CREO), Structural Analysis (Finite Element Analysis), Computational Fluid Dynamics, GD&T, Sheet metal Design For Manufacturing, Tolerance Analysis, BOM creation
Fabrication knowledge: Machining, Press brake, NCT, Punch press, Laser cutting, Woodwork, 3D Printing
Manufacturing knowledge: Injection molding, CNC machining, Die Casting, Metal stamping, Plating
Software: Matlab, Simulink, Python, ANSYS Workbench, ANSYS Fluent, ROS, Agile, Fusion
Languages: English, Mandarin Chinese, Bahasa Melayu

Work Experience

Mechanical Engineer — March 2023 - August 2025
Foxconn Industrial Internet — *Santa Clara, CA*

- Improved first pass yield through engineering design drawing reviews, tolerance analysis and assist in engineering prototype validation and testing, mainly components on server racks and chassis by overseeing quality assurance from NPI to mass production, performing root cause analysis and managed over 100+ projects using SAP
- Optimized network enclosure components' mechanical design in product development stage using CAD modeling to reiterate sheet metal design for manufacturing and processes including plastic injection molding, CNC machining, die casting, 3D printing, surface finishing and plating while performing cost analysis
- Served as liaison in a cross functional technical team between global network technology companies and overseas high volume mass production team, improving project delivery timelines by 30% through enhanced coordination with program management teams to balance product quality, cost, and schedule to assist supply chain logistics

Undergraduate Research Assistant — Fall 2021 - Spring 2022
Air Water Flows Research Lab — *Berkeley, CA*

- Designed a hydrogen bubble generator using a 250V DC power supply with relays to probe bubble nucleation site on a platinum wire to visualize frictional flow for reducing hydrodynamic drag on a hydrophobic surfaces, achieving an estimated 60% frictional resistance reduction
- Assembly of testing rig using fabrication processes including machining of off-the-shelf components, and 1kW photographic lamps to visualize flow speeds of 0.1 to 8m/s in tank, controlled by 2 potentiometers
- Applied SolidWorks and analyzing CFD simulations for system modeling, integrating circuitry designing safety parameters

Projects

Development of High-Temperature-Resistant Traceability Solutions for Brake Parts — Fall 2025 – Spring 2026

- Team collaboration in research and development of technology that allows traceability of products through the manufacturing cycle under high temperature cycles

Robotics | *CAD, ROS, Python* — Fall 2022

- Designed and programmed a prototype TurtleBot with ROS for optimizing path planning, integrating AR tracking and LiDAR detection that achieved 100% obstacle avoidance accuracy test cases after mapping a 30 m^2 area autonomously

Mechatronics Design | *CAD, Fabrication* — Spring 2022

- Conceptualized a 3-coordinate storage machine capable of transporting 15lb loads to designated slots with ± 0.2 mm positioning accuracy, using ESP32, motors, actuators, producing components with laser cutting and 3D printing, working with an interdisciplinary team from CAD design to circuitry

Electronics for the Internet of Things Design | *CAD, Python, 3D printing* — Fall 2021

- Implemented a prototype remote-controlled feeding system using Servo motors, with real-time data monitoring using ultrasonic sensor, accessible globally via IoT integration and reduced manual feed time by 30 minutes each day, removing in-person presence

Manufacturing and Tolerancing | *CAD, Fabrication* — Fall 2020

- Innovated an ergonomic portable laptop desk using Solidworks for improved remote work productivity during Covid-19

Leadership & Organizational

Pi Tau Sigma Honorary Society of UC Berkeley and Math Club

- Conducted tutoring and course advising of 5+ people per sessions
- Developed outreach events for networking with industry panels each month