

Terry Yu

669-281-6222 | terryyu05@gmail.com | [linkedin.com/in/terryyu05](https://www.linkedin.com/in/terryyu05) | [ty1649.github.io](https://github.com/ty1649)

EDUCATION

University of California, Los Angeles

Expected June 2026

Bachelor of Science in Mechanical Engineering - GPA: 3.76

SKILLS

Design and Analysis: SolidWorks, Ansys Mechanical, Ansys Fluent, Altair Inspire, Fusion 360, HSMWorks, GD&T

Manufacturing: Manual Mill, Manual Lathe, CNC, FDM and SLA 3D Printing, Waterjet, Plasma Cutter, Soldering

Electrical and Software: Java, MATLAB, Python, Arduino, C++, Visual Studio, Git, HTML, CSS

EXPERIENCE

UCLA Robotics & Mechanisms Laboratory (RoMeLa)

May 2025 – Present

Research Assistant

Los Angeles, CA

- 3D modeled, printed, and assembled parts for RoMeLa's Cosmo to closely match the Netflix robot, refining designs through multiple iterations to improve accuracy and visual quality for demos

Stanford University

June 2024 – May 2025

Mechatronics Research Intern

Palo Alto, CA

- Designed and manufactured hardware components on computer vision-based Xenopus embryo sorter for the Beel Research Group, projected to sort 50 eggs per second with 99% accuracy
- Developed a PDMS-based microfluidics chip with a serpentine flow channel and quake valve sorter mechanism, ensuring quick and accurate imaging and sorting of millimeter-wide Xenopus embryo
- SLA printed mold and cast chip, FDM printed iterations of housing for chip and all electrical components

EXTRACURRICULAR ACTIVITIES

Bruin Formula Racing

September 2023 – Present

Sprocket Responsible Engineer

Los Angeles, CA

- Led design and optimization of sprocket and chain assembly, including front/rear sprockets, chain, and motor shaft
- Achieved 42% weight reduction in sprockets with topology optimization in Altair and FEA simulations on Ansys
- Drafted engineering drawings with GD&T standards, ensuring precise and cost-effective manufacturing of assembly
- Designed and poured custom CV boots, iterating through 5 versions of mold with novel dovetail slider mechanism, ultimately replacing dysfunctional boots to enable reliable protection of joint while reducing cost by 50%

Supermileage Vehicle

October 2023 – Present

Hydrogen Lead

Los Angeles, CA

- Led 3 project teams of over 30 members for the design and analysis of hydrogen fuel cell to meet 1 kW requirement for competition car, dividing work based on individual strengths and skills for efficient progress
- Ran CFD simulations with Ansys Fluent, ensuring optimized flowfield design for water removal and mass transfer
- Generated CAM with HSMWorks for manufacturing in house on 3-axis CNC, cutting costs by over \$200
- Successfully integrated Horizon Fuel Cell with competition car, passing hydrogen technical inspection

PROJECTS

Pen Plotter | [Project Link](#)

September 2024

- Designed and 3D printed a custom CoreXY belt configuration pen plotter, featuring fully 3D printable recirculating ball bearing linear rails for precise, low-friction movement
- Developed a bitmap image to G-code slicer with Java/image processing algorithms, optimized for CoreXY control
- Integrated real-time G-code communication and interpretation on Arduino using Python and C++

Electric Go Kart | [Project Link](#)

May 2024

- Led team of 4 in design, analysis, manufacturing, and assembly of a three-wheeled go kart with speeds of 15 mph
- Used plasma cutter, band saw, drill press, mill, lathe, laser cutter, and 3D printer to manufacture parts from recycled scraps, reducing total cost to under \$100
- Innovated a single wheel steering with bevel gear mechanism to achieve significant weight savings over competitors

Auto Shop Technician

Aug 2021

- Performed hands-on maintenance and repairs on various vehicle systems, including engines, brakes, and suspensions, developing practical mechanical skills and troubleshooting experience