Terry Yu

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Education

University of California, Los Angeles Expected June 2027

Bachelor of Science in Mechanical Engineering - GPA: 3.70

Skills

Design and Analysis: SolidWorks, Ansys Mechanical, Ansys Fluent, Altair Inspire, Fusion 360, HSMWorks, GD&T
Manufacturing: CNC & Manual Mill/Lathe, FDM/SLA 3D Printing, Waterjet, Plasma/Laser Cutting, Soldering
Software: Python, MATLAB, Java, C++, Arduino

Experience

Mechanical Engineering Intern June 2025 – Present

DropletPharma Corp. *Los Angeles, CA*

- Independently organized design and testing of innovative nozzle geometry to reliably dispense 1 µL of various fluids; achieved variation below 5% across 100+ tests through 5+ iterations, refining design and manufacturing methods
- Engineered compact fume; extractor for toxic vapor removal in medical device; balanced airflow efficiency and serviceability within strict 30 mm × 10 mm × 5 mm packaging constraint
- CNC machined precision components from PEEK, PTFE, 6061 Aluminum, and 316 Stainless Steel to support R&D of chemical-handling systems

Drivetrain Lead September 2023 – Present

Bruin Formula Racing *Los Angeles, CA*

- Led rear driveline system design for FSAE EV, aligning geometry, materials, and integration with electrical and chassis teams to meet performance and reliability targets
- Programmed and machined components with ±0.003 in tolerances and interference fits using HSMWorks and 3-axis CNC; reduced manufacturing costs by 20% through design improvements
- Performed FEA and topology optimization on sprockets, achieving a 42% weight reduction validated by physical testing, improving drivetrain efficiency and serviceability
- Pioneered custom CV boots and pouring process, iterating through 5 versions of mold with novel slider mechanism; ultimately replaced dysfunctional boots to enable reliable protection of joint while reducing cost by 50%

Mechatronics Research Intern June 2024 – May 2025

Stanford University *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

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 custom bitmap to G-code slicer with image processing algorithms using Java, Python, and C++, enabling precise CoreXY motion control and real-time plotting communication with Arduino

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
- Invented a single wheel steering mechanism with bevel gear to achieve significant weight savings over competitors