

EDUCATION

University of California, San Diego

SEP 2021 – Present

Bachelor of Science (B.S.) in Mechanical Engineering

(Expected JUN 2025)

- 3.952 GPA (cumulative).
- Eleanor Roosevelt College, Honors; with a Regional Specialization in Europe; study abroad experience in Berlin, Germany.

UCLA Summer Engineering Institute

SUMMER 2019

- Completed a college course (*Introduction to Engineering Design – Rocketry*) on high-powered rocket flight dynamics, propulsion, recovery, simulation (MATLAB), CAD (SolidWorks), manufacturing, and the engineering design process.
- Designed, constructed, launched, and recovered a fully custom rocket to 2,500 feet with onboard avionics and camera.

EXPERIENCE

Students for the Exploration and Development of Space (SEDS) at UCSD

OCT 2021 – Present

Structures Engineer (Halya Team – Structures Subteam)

- Currently designing Halya, a pressure-fed methane-liquid oxygen sounding rocket (40,000 ft predicted apogee).
- Designed structural longerons and bulkheads using SolidWorks and performed analysis with Finite Element Analysis (FEA).
- Researched aerodynamic panel, fins, and nosecone geometries using Computational Fluid Dynamics (CFD).
- Prototyped composites layup process and other components through CNC milling and 3D printing.

Triton Robotics

OCT 2021 – JUN 2022

Member (Mechanical Division – Sentry Subteam)

- Redesigned and simplified the chassis of the Sentry robot to significantly reduce weight and complexity for competition in RoboMaster University League 2022 while incorporating new design elements, such as composites and square tubing.
- Verified design using finite element analysis (FEA), rapid prototyping, tolerance verification, and sourcing parts.
- Manufactured and assembled parts using AutoCAD and CNC; currently undergoing iteration and optimization.

Galileo Robotics (FIRST Robotics Competition (FRC) Team 4669)

AUG 2018 – JUN 2021

Captain, Lead Designer

- Designed using CAD, prototyped, and manufactured parts out of plastics and aluminum using 3-axis CNC milling, 3D printing, and power tools for complete assembly of a robot to compete in the FIRST Robotics Competition (FRC).
- Taught CAD (Autodesk Inventor), 3-axis CNC, 3D printing, and mechanical design to recruits.
- Coordinated between various subteams to ensure cohesive workflow; managed the logistics of the team (27 members).
- Competed in FRC; 2021 FRC Innovation Challenge Semifinalist and 2019 FRC Silicon Valley Regional Quarterfinalist.

SKILLS

Computer-Aided Design (CAD) • SolidWorks • Autodesk Inventor • Fusion360 • Finite Element Analysis (FEA)

Computer-Aided Manufacturing (CAM) • 3-Axis CNC • 3D Printing • CO₂ Laser Cutting • Vinyl Cutting

Composite Layup • Machining • Drill Press • Chop Saw • Dremel • Power Tools • Soldering

Software Tools • MATLAB • Python • Java • HTML/CSS • Microsoft Office • Google Suite • **Technical Documentation**

AWARDS

Eta Kappa Nu (IEEE-HKN) • Engineering honor society affiliated with the Institute of Electrical and Electronics Engineers.

UCSD Chancellor's Scholarship • Prestigious scholarship (\$20,000) for academic achievement.

Edward Waguih Ishak Scholarship • Scholarship for excellence in the engineering curriculum and extracurriculars.

UCSD Eleanor Roosevelt College Honors Program • Selective program for high-achieving ERC students.

Provost Honors • For achieving a minimum term GPA of 3.5 and 12 graded units.