Ethan C. Quan

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Education

GALILEO ACADEMY OF SCIENCE AND TECHNOLOGY | SAN FRANCISCO, CA
Jan. 2018 - Present
- Current senior; Class of 2021
- 4.09 GPA

Extracurricular Activities & Experience

CAPTAIN, LEAD COMPUTER-AIDED DESIGNER (CAD) | GALILEO ROBOTICS (FRC 4669)
Aug. 2018 – Present
- Created 3D designs and schematics for Galileo Robotics as a part of the FIRST Robotics Competition.
- Prototyped designs and fabricated parts out of HDPE, PLA, and aluminum using CNC and 3D printing technologies.
- Taught parametric-based 3D modeling (Autodesk Inventor), CNC, and 3D printing skills to new recruits.
- Coordinated between subteams to ensure cohesive workflow; spearheaded several projects.
- Competed in FIRST Robotics Competition as part of the drive team.

CAPTAIN, FOUNDER | GALILEO ROCKETRY (TARC 20-6661)
Nov. 2019 – Present
- Founded Galileo Rocketry as a team in the American Rocketry Competition (TARC).
- Taught basic aerodynamic and rocketry concepts to nine new members of the rocketry team.
- Developed a custom rocket design using OpenRocket to reach competition goals and criteria.
- Built a solid-motor powered rocket capable of altitude calibration and reaching 800 feet while carrying a payload of an egg.

ASSISTANT MANAGER, FORMER RUNNER | GALILEO CROSS COUNTRY
Sep. 2018 – Present
- Long distance (3+ miles) running and training after school throughout the fall season of 2018.
- Maintained a roster of 35 runners, including keep track of mileage and inventory.
- Planned and coordinated team events, fundraising, and school-wide events, such as the Fall Sports Banquet.
- Assisted with the city-wide cross-country races which included timekeeping, registration, and collection of runner tags.

AEROSPACE ENGINEERING | UCLA SUMMER ENGINEERING INSTITUTE
Jul. 2019 – Aug. 2019
- Completed college-level course on the modeling, design, and construction of high-powered rockets.
- Learned basics of rocket flight dynamics, propulsion, and recovery.
- Implemented engineering design process; peer design review, feedback, iteration, and scale modeling.
- Custom rocket design and simulation; created 3D schematic using CAD (SolidWorks).
- Custom numerical approximation script in MATLAB to predict flight trajectory and characteristics
- Successfully launched and recovered a fully custom high-powered rocket to 2,500 ft. with integrated onboard avionics and camera.

Skills & Abilities

PARAMETRIC 3D MODELING AND DESIGN
- Create parametric 3D models for drafting, display, or manufacturing by CNC or 3D printing.
- Proficient in Autodesk Inventor and Autodesk 123D Design; moderate knowledge of SolidWorks.
- 4 years of CAD experience.

3D PRINTING (FUSED DEPOSITION MODELING PRINTERS)
- Prepare, print, and post-process 3D printed objects using FDM printing technology.
- Proficient in the use of PLA, ABS, and PETG plastic filaments.
- Proficient in the use of slicers, Ultimaker Cura and PrusaSlicer; and 3D printers, Prusa i3 MK3S MMU2 and Creality Ender-3 .

CNC MACHINING
- Prepare, cut, and post-process parts for 3-axis CNC milling.
- Proficient in the cutting parts out of plywood, MDF, HDPE, polycarbonate, and aluminum.
- Proficient with Carbide 3D Shapeoko.

PARTS MACHINING & POWER TOOLS
- Proficient in the use of various equipment and power tools, such as arbor press, drill press, Dremel, belt sander, drill, and jigsaw.

PROGRAMMING
- Basic knowledge of Python and MATLAB.

References available upon request