Erik Ho

erikho724@gmail.com | [Portfolio](#) | linkedin.com/in/erik-ho-b7573726b/

Education

California State University, Los Angeles | Los Angeles, CA   May 2024
Bachelor of Science in Mechanical Engineering   GPA 3.515

Projects

3D-Printed Fixed-Wing Aircraft Competition   *Sep 2023 – May 2024*

• Designed three different airfoil preliminary sketches for integration into SolidWorks for 3D modeling ahead of the requested schedule and reduced time consumption by 10%.

• Analyzed the different airfoils with the Flow Simulation application from SolidWorks and applied virtual wind tunnels surrounding the designs under a large refinement mesh for better evaluation of the performance during flight.

• Applied Ultimate Tensile testing on the chosen filament and reduced potential operational costs of the product by 40%.

• Conceptualized the ideal wingspan to fuselage ratio needed to increase the efficiency of the overall prototype by 30%.

• Reduced the magnitude of forces acting on the prototype design by hollowing out the insides of the 3D model on SolidWorks and implemented Ribs to provide more stability during flight.

Energy Storage Concept Design   *Sept 2020 – Oct 2020*

• Coordinated a team of two individuals to design a system that can pull a mass up a 30-degree incline using an electric motor with a voltage power supply.

• Designed three 3D model concepts of systems with three different types of gears: Spur, Bevel, and Helical with SolidWorks which increased work comprehension by 10%.

• Reduced potential operational costs of the product by 40% by streamlining the different concepts through SolidWorks simulation with different materials.

• Increased efficiency of the final design by 20% through alterations of rope materials and grip placements on the mass, improving the overall speed and time to transport said mass.

Remotely Operated Propulsion Vehicle Competition   *Oct 2019 – Dec 2019*

• Managed a team of three to develop a working remotely operated propulsion vehicle capable of underwater submersion and maneuverability to achieve the fastest running propulsion vehicle in the competition.

• Developed multiple 3D model propellers for the vehicle with SolidWorks through the process of 3D printing and designed the blueprints for the vehicle's structural composition.

• Optimized the vehicle's overall efficiency by 20% through management of the weight to increase the magnitude of the buoyant forces acting upon the submersion of the vehicle.

Skills

Programming: Arduino, C++, JavaScript, LabVIEW, MATLAB, Node.js, Python, Simulink
Manufacturing: Soldering, 3D Printing, Power tools, Machining
CAD/FEA: SolidWorks, Patran
Languages: English (fluent), Chinese (Conversational), Spanish (Elementary), Japanese (Elementary)