**Sean Liu**

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**Recent Graduate seeking an Engineering Position**

*Self-motivated, detail-oriented Mechanical Engineering professional seeking to leverage advanced education and hands-on design experience to support completion of complex projects that directly contribute to the achievement of long-term objectives.*

*~* ***Summary of Qualifications*** *~*

* ***Engineering Support***: Hands-on technical experience working with multi-discipline engineering design teams to design, build, and fabricate equipment, install complex sub-assemblies, and develop solutions to resolve product design issues.
* ***Prototyping & Modeling***: Proficient in creating detailed 2D/3D models and prototyping parts to support testing of new mechanical processes, component designs, and new systems/subsystems according to ASME/GD&T standards.
* ***Project Coordination***: Proven success coordinating variety of engineering projects from initial planning to the on-time delivery of project deliverables; managing project timelines, and conducting/reporting EVT, DVT, or PVT test data.
* ***Issue Troubleshooting:*** Highly analytical and detail-driven with a passion for troubleshooting complex issues, isolating root cause issues, and developing effective solutions to address and resolve a wide array of engineering issues.
* **Key Strengths:** Strong communicator/writer, skilled at exceeding expectations in team-driven and self-guided roles, utilizing strong work ethic and processing to ensure high quality completion of each project. Fluent in English and Mandarin Chinese.

*~* ***Core Competencies*** ~

Computational Design & Analysis • Project Management • Mechanics of Materials • Structural Dynamics & Statics •Physics

Advance Engineering Mathematics • Failure Analysis • Heat Transfer • Systems Design • CAD • 3D Printing • Lasers and Optics

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|  | **Educational Background** |  |
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**Bachelor of Science in Mechanical Engineering (BSME)** - Seattle Pacific University (SPU), Seattle, WA (06/2021)

*Technical Skills*: SolidWorks, Python, JavaScript, PowerShell, MATLAB, C++, Labview, Software Design, Test Plans, Microsoft Office Suite, AutoCAD, 3D/2D Design Software, Mechanical Design, 3D printing, Robotics, Prototyping

*Machining and Welding*: TIG Welding, Lathe, Milling Power tools, Chop Saws, Horizontal/Vertical Saws, Grinders, Solid Modeling, Manufacturing Methods, Calipers, Actuators, Fabrications, Drawings, Metrics, Hardware Assembly, Construction

*Professional Affiliations*: Member in good standing ASME (American Society of Mechanical Engineers)

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|  | **Career Highlights** |  |
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***Key Projects & Assignments:***

* *Senior Capstone Thesis Project Prosthetic Hand Mechanical Lead (9/2020-6/2021)*: Responsible for conceptualizing, designing, and fabricating a fully sized polymer prosthetic hand from a 3d printer; testing each individual part and ensuring full functionally of overall design and final product. Received project sponsorship and improved prototype based on feedback and recommendations.
  + Utilized SolidWorks to design, model, assemble, and operate a prosthetic hand that can grab and pinch.
  + 3D printed all components of the prototype prosthetic hand and implemented tensioners and Electrical Engineering parts such as Bluetooth receivers and PSOCs to support the functionality of fingers.
* *Sterilization Porch Box Project Mechanical Lead (3/2020-6/2020):* Designed and engineered a porch box using UV light bulbs to sterilize bacteria and viruses on packages from grocery stores and/or take-out food packages; tested sterilization, cost, IP-52, and Factor of Safety to meet all risk analysis requirements.
* *Baja Race Team Structural Designer (2019-2021)*: Hand-picked to serve as part of the team charged with designing and building an off-road racing Dune Buggy for the university; as the Structural Design team member overseeing the design, building, and testing of the Buggy’s frame and controls, including the brakes, steering wheel, and chassis.
  + Utilized SolidWorks to model Dune Buggy parts and frame, detailing needed parts for fabrications.
  + Organized labs to perform and conduct experiments to test parts and frame in timely manner.
  + Successfully raised $5K to fund project by personally presenting/demonstrating the designs to key supporters.
* *Pumped-Storage hydroelectricity System Designer (PSH) (2019-2020)*: Planned, prepared, and designed Hydro Pump storage plan to support creation/generation of electric power by creating storage area that uses gravitational potential energy of water, pumped from a lower elevation reservoir to a higher elevation and releases the stored water to turn turbines.