

VICTOR Q. LI

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Education

Boston University College of Engineering, Boston, MA

Bachelor of Science, Mechanical Engineering

Recipient of the Boston University Grant- Must maintain 3.0 GPA

GPA: 3.3 out of 4.0

**May 2016
2012- Present**

Related Coursework: Electro- Mechanical System Design, Energy and Thermodynamics, Fluid Mechanics, Heat Transfer, Material Science, Mechanics I&II, Mechanics of Materials, Mechanical Vibrations, Instrumentation & Theory of Experiments

Academic Projects

- Designed manufacturable gearbox with 1/240 gear ratio and performed tolerance, life, bearing load, and finite element analysis in Solidworks. Satisfied minimum life of 25,000 hours, 50 pound overhung load at output shaft, and maximum input rotational speed of 5000 rotations per minute.
- Redesigned, manufactured, and tested a prototype based on pillow block load cells of Montalvo Corporation. Replaced strain gauge technology with inexpensive piezoelectric sensors, reducing original manufacturing and assembly time by half.

Experience

Agira, Boston, MA

September 2015-Present

Design & Fabrication Intern

- Optimized efficiency of micropism optical array and fabricate system to reduce manufacturing costs of photovoltaic modules by 50% and capital expenditures from \$1 billion to \$50 million per gigawatt factory.
- Developed optical system for equal light distribution and concentration in liquid- crystal displays.

Boston University College of Engineering, Boston, MA

September 2015- Present

Research Assistant

- Predict and control the morphology of soft mechanical structures through the swelling of elastomers and variation in experimental parameters to model aircraft wings, blood vessels, and thin objects.

Boston University Department of Astronomy, Boston, MA

September 2013- Present

Research and Design Assistant

- Modelled and rapidly prototyped six iterations of aerospace models in two months to exhibit flight principles for educational demonstrations.
- Iterated through multiple designs and fabrications of a stereoscope based on market products for optics and psychology research to study human depth perception and 3-dimensional viewing.
- Developed a pseudoscope optical instrument based on binocular vision and prisms funded by the Undergraduate research Opportunities Program to further understand human depth reversal.

The Will-Burt Company, Orville, OH

December 2013- August 2015

Corporate Research and Development Mechanical Engineering Co-op

- Designed and assembled critical components to a drone defense vehicle in three months as joint project with Northrop Grumman for the Secret Service. Ensured cost of goods did not exceed \$23,000 to yield 35% gross margin ratio and successfully tested final product under 60 mph winds.
- Assembled parts to a pneumatic payload tilting system according to Inventor drawings as a government project for the Naval Surface Warfare Center Dahlgren Division. Successfully passed stress testing beyond normal operating capacity.

Skills

- **Computer:** Adobe Photoshop, Autocad, C++, Creo, Inventor, Matlab, Microsoft Office, Solidworks, Zemax
- **Languages:** Fluent in Mandarin Chinese

Activities

Boston University Rocket Propulsion Group

September 2012- Present

- Developed a copper combustion chamber for the Lotus liquid engine used on the Starscraper suborbital launch vehicle. Capable of producing 1500 pounds of thrust.