James Ho

Los Angeles, CA | **jamesho512@gmail.com** | **626-731-2402** | **https://jamesho.page**

EDUCATION

University of California, Santa Barbara | B.S. Mechanical Engineering *Jun 2019*

Awards: Dean's List, Robot Design Competition (1st Place Award), E-Sequence Writing Excellence Award

Skills: SolidWorks CAD/CAM/PDM, MATLAB, Arduino, C++, G&M Code, COMSOL, Abaqus/CAE, CES

EXPERIENCE

Snap-on Tools **Industry, CA**

Test Engineer *Nov 2019 – Present*

- Managed the validation of 12 new products by testing them according to ASME B107.300 and ISO 6789 standards
- Decreased fatigue testing time by over 50% by developing and implementing a motorized wrench-torqueing system

Design Engineer Intern *Jul 2019 – Oct 2019*

- Improved mechanical wrench accuracy from ±4% to ±3% by implementing new internal spring rate
- Increased the signal range of wireless electronic tool from 25m to 200m by eliminating signal obtrusion

Santa Barbara Infrared, Inc. **Santa Barbara, CA**

Mechanical Engineer Intern *Jun 2018 – Jun 2019*

- Increased the rigidity of 3D-printed camera mounts up to 125% while reducing material to minimize manufacturing costs
- Analyzed the thermal profile of an infrared camera mount to validate that it can properly act as a heatsink in vacuum

UCSB College of Engineering Machine Shop **Santa Barbara, CA**

Undergraduate Teaching Staff *Mar 2017 – Jun 2019*

- Instructed over 100 students to safely operate mills, lathes, and other machining equipment
- Consulted weekly with engineering students to optimize their design projects for manufacturability

Vascular Biosciences **Santa Barbara, CA**

Mechanical Engineer Intern *Mar 2018 – Jun 2018*

- Performed assembly and quality control of a cardiovascular biopsy catheter in an ISO class 7 cleanroom
- Fabricated a mount for catheter deploying mechanism to ensure steady and repeatable operation

PROJECTS

Northrop Grumman Air Bearing Test Rig *2018 – 2019*

- Collaborated with a team of five engineers to develop a 225 sqft. frictionless environment simulating outer space
- Established a 3'x3' scalable proof of concept with a flatness tolerance of 0.001"/sqft. and a friction of $\mu < 0.005$

Electric Bicycle Project *2018*

- Independently designed and built an electric bicycle from scratch, capable of reaching 25mph with a 20-mile range
- Fabricated a 650Wh lithium-ion battery pack by creating custom wiring and housing for 60 individual battery cells

UCSB Formula SAE *2017 – 2018*

- Led a team of four engineers to design and manufacture the chassis of a Formula level race car
- Optimized chassis rigidity and aerodynamics across a dozen design iterations using COMSOL FEA

INTERESTS

Automated Currency Mining Script

- Developed a C++ based script that automated basic algorithms to generate high value items in a video game
- Deployed the script on three Windows machines, generating over $1,000 (USD) in one week during peak demand

Self-Taught Automotive Repair

- Diagnosed three different vehicle issues using OBD-II interface and executed the appropriate repairs
- Completed full repairs for timing belt, valve cover, rear axle, suspension subassembly, and exhaust system