

Marshall Henry Craft

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<http://www.marshallcraft.engineer/>

Torrance, CA 90503

Highly analytical, collaborative engineering professional with experience creating innovative designs.

Key Skills and Knowledge Areas

- Excellent iterative design and prototyping skills. Able to move from concept stage to design and physical prototyping in the shop.
- Solid command of 3D modeling software to produce engineering drawings for mechanical parts and assemblies.
- Effective communicator of technical concepts when writing and presenting to peers, superiors, and clients.
- **Machining:** Mill, Lathe, Welding, Lasercutting, Waterjetting, 3D-Printing, Benchtop Tools, Soldering
- **Software:** Python, Solidworks, Microsoft Office, MATLAB, LabVIEW, MasterCam, Arduino, Autodesk Fusion 360, Creo

Education

Massachusetts Institute of Technology (MIT)

Cambridge, MA

Bachelor of Science in Mechanical Engineering

June 2017

Relevant Coursework: Circuits and Electronics, Dynamics and Controls I & II, Design and Manufacturing I & II, Measurement and Instrumentation, Engineering Systems Design & Development, Fundamentals of Programming
Design Project:

- Completed senior project in engineering design and development, a yearlong course modifying a BMW i3 to charge using hydrogen produced from an aluminum reaction.
- Led sub-team concerned with fuel cell and power electronics, responsible for taking hydrogen produced by reaction sub-team and turning it into electricity able to charge the vehicle.
- Created mounting system to integrate our hardware into the vehicle and allow for ease of wiring and tubing
- Developed specifications for fuel cell input hydrogen and output power to the project vehicle.

Beta Theta Pi-Member of Leadership Council: Oversaw fraternity activities, public relations, and conference planning.

Work Experience

Physical Optics Corporation—Applied Technologies Division

Torrance, CA

Mechanical Engineer

March 2019—Present

Associate Electro-Mechanical Engineer

September 2017—March 2019

- Produced 3D models and engineering drawings for hardware to mount buoy launcher on helicopter UAV.
- Designed chassis, winch modules, and traps for semi-autonomous rover to meet client specifications.
- Collaborated with electrical engineers to design prototypes for electronics boxes and enclosures.

Joe Gibbs Racing—NASCAR Team

Charlotte, NC

Mechanical Engineering Intern

June 2016—August 2016

- Instrumented pneumatic impact wrenches to allow for measurement of speed and pressure.
- Designed circuit and LabVIEW program to allow for data collection during pit practice.
- Collaborated with team to prepare cars for wind tunnel testing and documented changes between runs.

MIT—Kavli Institute for Astrophysics and Swager Lab

Cambridge, MA

Undergraduate Researcher

June 2014—June 2016

- Modified existing LabVIEW program to allow for control of mirror serving x-ray source.
- Produced 3D model and engineering drawings for parts to be machined for the current experimental setup.
- Developed program in LabVIEW to automate and increase efficiency of time dependent data collection.
- Designed and 3D modeled enclosure for gas flow testing of RFID tags.
- Synthesized and characterized new RFID tag sensors.