

Miranda Sydney Carson

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EDUCATION

Bachelor of Science, Massachusetts Institute of Technology February 2022

Mechanical Engineering, Minor in Brain & Cognitive Sciences; Cumulative GPA: 4.4/5.0

Naval Nuclear Power Training Command, Goose Creek SC September 2010 – June 2012

CERTIFICATIONS

Engineer-in-Training (EIT) certified, #177065, CA BPELSG, July 2022

Electronics Technician Maintenance Supervisor (ETMS), USN, August 2015

EXPERIENCE

Freelance Mechanical Design Consultant February 2022 - Present

Provide design, CAD, and low-volume manufacturing solutions to businesses in a variety of industries including automotive, composites, and consumer goods; with a specialization in moldings, castings, and additive manufacturing. Review and optimize current business practices for DFMA, often resulting in savings up to 50% for cost or assembly time.

Massachusetts Institute of Technology, Cambridge MA September 2017 – December 2021

Teaching Assistant “Electronics for Mechanical Systems”, September 2021 - December 2021

Assisted with teaching lab component of “Electronics for Mechanical Systems” class, educating students on basic electrical theory, analog and digital circuit analysis and design, and soldering skills.

Undergraduate Researcher, July 2021 - August 2021

Designed, prototyped, and built a micro-endoscope for small animal in-vivo neuronal imaging, utilizing FPGAs, optical table, and visual programming language Bonsai-rx to enable simultaneous recording of multiple fluorophores.

Teaching Assistant “Design & Manufacturing II”, January 2021 - June 2021

Assisted with teaching lab component of “Design & Manufacturing II” class, educating students on machine shop usage, with a focus on CNC machining, injection molding, and thermoforming to produce an assembly run of 50 yo-yos.

Makerspace Mentor, Project Manus, June 2018 - November 2018

Assisted with work-up and initial implementation of training programs of Project Manus’ “The Deep Makerspace”. Trained students in a variety of shop machines and practices, from 3D printing and laser cutting, to milling and turning.

Etagen Inc, Palo Alto, CA

February 2017 – August 2017

Laboratory Technician Intern

Assisted with linear generator prototype unit testing, inspection and rebuild. Manufactured in-house and assisted with the design of multiple custom printed circuit boards. Fabricated, assembled, and implemented multiple electronic systems for on-site Pilot test unit.

United States Navy

July 2012 – July 2016

Electronics Technician, Nuclear, USS Missouri, Fast Attack Submarine

Managed a team of five technicians responsible for the Preventative Maintenance Program for Reactor Instrumentation. Executed critical at-sea repairs of reactor rod control systems on three occasions, allowing sustained underway operation. Routinely performed complex evolutions such as reactor plant start-ups, high-power operations, and shut-downs. Coordinated with vendors to maintain \$1.5 million in reactor control equipment repair parts with zero discrepancies.

SKILLS

Software/Languages: SOLIDWORKS, Autodesk Fusion360, MATLAB, Python, Arduino, Adobe Photoshop, Microsoft Excel

Mechanical and Electrical: CAD/CAM for DFM/DFA and mold-making, rapid prototyping, injection molding, thermoforming, additive manufacturing, laser cutting, THT/SMD soldering, and common shop or power tool usage.