Bradley Seamons

bnseamons@gmail.com | 669-264-0874 | bnseamons.github.io

Education

UC BERKELEY, Berkeley, CA (August 2017 - May 2021)

Mechanical Engineering Major, Electrical Engineering and Computer Science Minor- 3.3 GPA

Relevant Courses: Thermodynamics, Solid Mechanics, Manufacturing and Tolerancing, Orthopedic Biomechanics, Dynamic Systems and Feedback, Data Structures and Algorithms, Electronics for the Internet of Things

Clubs: Hispanic Engineers and Scientists, EnableTech, Space Enterprises at Berkeley

Skills and Abilities

Solidworks, Fusion 360, MATLAB, AutoCAD, Java, JavaScript, HTML, CSS, Python, C++, Arduino

Work Experience

Hardware Engineering Intern, General Motors (Summer 2020)- Warren, MI

- Incoming Intern at General Motors
- Assigned to lane-keep assist project.

Mechanical Engineering Intern, Phoenix Deventures (Summer 2019)- Morgan Hill, CA

- Machined a metal fixture on a manual mill and CNC lathe.
    - Designed a Solidworks model of fixture to generate G-code for the CNC lathe.
    - Cut main large holes with a manual mill.
    - Saved the company 10 hours because of how quickly needles could be swapped out.
- Used Solidworks to design an attachment for the end of a catheter.
    - Used finite element analysis in Solidworks to test attachment under anticipated loads.
    - 3D printed a model to test for fit in the catheter.
    - Reprinted new, slightly smaller, working model that fit correctly.
- Wrote and modified Engineering Change Order reports for various company parts.

Center for Access to Engineering Excellence Tutor (March 2019-Present)- Berkeley, CA

- Tutored students one on one in Calculus, Physics, and Mechanical Engineering classes.
- Prepared supplementary worksheets for students to practice.
- Adapted to working remotely during CoronaVirus pandemic by moving tutoring online to Google Hangouts

Projects

JARL- Just Another Robotic Limb

- Used Fusion 360 to design the 3 axis prosthetic arm that can be operated by a quadriplegic patient.
- Utilized MATLAB optimization tools to optimize reinforcements needed in parts.
- Wrote Arduino code that can move fingers to close around differently shaped objects.
- Developed the Android app that runs on takes user input and sends commands to Arduino on arm.

Item-Eyes

- Developed user interface for Item-Eyes app, an app that allows users to keep track of receipts.
- Used Ionic and Cordova to develop a web based app using JavaScript, HTML, and CSS

Tablut

- Used Java to implement the Tablut game, a chess-like board game.
- Developed an AI that found moves using the mini-max algorithm, and was able to quickly force a win in 4 moves if possible due to effective alpha-beta pruning.

Gitlet

- Developed a clone of git with Java.
- Used serialization to store needed data to maintain state of git repository between commands.

Leadership

Enable Tech Board Member (2018-Present)

- Mentored new members in Arduino software and hardware.
- Met with a quadripleic patient once a month for feedback on the progressing design of JARL.