MARIA E. KLOIBER

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EDUCATION

Boston University **Sep 2020 - Dec 2022 (expected)**

Master's, Mechanical Engineering

St. Olaf College **Sep 2016 - May 2020**

Bachelor's, Computer Science & Political Science | GPA: *3.71*

Awards & Achievements: Distinction in Computer Science, Distinguished Senior Leadership Award, Accepted to GHC'18 ACM Student Research Competition, *To Include is To Excel* grant recipient

Skills: SolidWorks, Cura, C++, Python, MATLAB, Java, Linux, Git, Microsoft Excel, 3D printing, GibbsCAM, Soldering, Power tools/Hand tools, Mandarin Chinese

Relevant Coursework: Medical Robotics, Intro to Robotics, CAD, Product Design, Engineering Design, Software Design, Statics, Human-Computer Interaction, Artificial Intelligence, Ethics in Software Design, CS Research

WORK EXPERIENCE

Research Assistant | Boston University Robotics Lab **Jun 2021 - Present**

- Clean, label, and process motion capture data in Qualisys for use in testing a new machine learning algorithm designed to detect muscle dysfunctionalities in humans.

Mechanical Engineering TA | Boston University **Jan 2021 - May 2021**

- Led lectures and discussion, held weekly office hours, graded homework, and oversaw course projects for EK 131 (Introduction to Engineering).

Research Intern | Brown University HCI REU **Jun 2019 - Aug 2019**

- Analyzed data trends in Python for an app that tracks users' sleep and generates personalized behavior change suggestions to help people improve their sleep.
- Recruited participants, conducted interviews, & analyzed interview transcripts for a user study with military veterans.
- Improved app UI data visualizations based on feedback from user testing and prototype iterations.

Research Intern | University of Minnesota Big Data REU **Jun 2018 - Aug 2018**

- Evaluated computational biology algorithms that aim to identify which existing drugs can be re-purposed to treat different diseases.
- Designed algorithm tests, analyzed test results, created result data visualizations, and investigated possible runtime improvements.

PROJECTS

Autonomous Sanitation Device **Feb 2021 - May 2021**

- Designed and built an automated sanitation device for cleaning raised surfaces like tables and counters, to reduce the risk to human cleaning staff during the COVID-19 pandemic.

Color Sorting Robotic Arm **Nov 2019 - Dec 2019**

- Led a team of 2 in designing, building, programming, and testing a robotic arm that randomly wanders around an enclosed area, identifies objects, then picks them up and sorts them by color category. Used LiDAR and ultrasonic sensors. Learned Python for robotics programming, and wrote entire program myself.

Self-Administering Oral and Maxillofacial Muscle Rehabilitation Tool **Jan 2018 - Feb 2019**

- Led a team of 4 in designing an adjustable tension-band headset for helping stroke patients rehabilitate and train their oral and facial muscles. Created initial design in SolidWorks and then built physical prototypes to run usability tests and material strength tests with a set of human study participants.