Rachel Brockman

Los Angeles, CA · (408) 420-8241 · rkbrockman@gmail.com · www.linkedin.com/in/rachel-brockman

EDUCATION

University of Southern California, Los Angeles, CA
M.S. Mechanical Engineering (Remote Attendance) **GPA:** 4.00 Expected May 2024
B.S. Biomedical Engineering (Mechanical Emphasis), Computer Programming Minor **GPA**: 3.86

Honors/Awards: Advancing Women in Technology Scholarship, USC Ahrens Family Scholarship, Dean's List

SKILLS

- SolidWorks (CSWA Certified), C++, Python, Java, Javascript, LabVIEW, MATLAB, Swift, R, Minitab, Discrete Event Simulation (Simul8), HTML/CSS, Photoshop, Microsoft Suite, Conversational Spanish

EXPERIENCE

Medtronic, Northridge, CA/Tempe, AZ/Louisville, CO
Mechanical Design Engineer I August 2022-Present

- Leading technical effort to develop rework methods for $16 million of defective pump inventory
- Informing mechanical drawing updates through tolerance analysis and testing of insulin pump components
- Designing modifications to current insulin pumps to allow for use by high ISF patients using SolidWorks

Mechanical Engineering Intern June-August 2021

- Designed charger and latching mechanism in SolidWorks for next generation insulin pump programs to improve usability of products
- Developed Python code for sensing and tactile feedback improvements for next generation pumps
- Collaborated with Human Factors, UX, Marketing, and Manufacturing teams to ensure design outcomes and features addressed reduction of burden and products were manufacturable before creating physical prototypes

Engineering Design, Reliability, & Manufacturability Intern June-August 2020

- Designed and created discrete event simulation model of Medtronic's ID2MR product development process in Simul8 by synthesizing business and engineering design controls SOP
- Utilized discrete event simulation to assess proposed modifications to product development process to reduce time to market for new devices
- Completed dry runs of reliability protocols for deep brain stimulation software
- Assessed test protocols and suggested modifications to enhance clarity and efficiency of tests

ENGINEERING PROJECTS

MEDesign Speculum Redesign August 2019 - May 2022

- Led team of three undergraduate students in development of novel vaginal speculum for obese patients
- Moderated team discussions with 20+ physicians and industry professionals to inform design of device
- Created prototype in SolidWorks based on physician input and team research
- Competed in USC Viterbi Maseeh Entrepreneurship Prize Competition Finals and pitched product to panel of investors and senior engineering faculty

Next Level Grip (USC BME Senior Design Project) August - December 2021

- Utilized SolidWorks and LabVIEW to develop a device to aid stroke survivors recover grip strength in both flexion and extension
- Lead manufacturing efforts of device, including 3D printing, CNC milling, and assembly

LEADERSHIP

USC Associated Students of Biomedical Engineering (ASBME) Executive Board May 2019-May 2022
Mentoring Chair ('19-'20), Secretary ('20-'21), Corporate Chair ('21-'22)

- Organized corporate development workshops and networking events for members of organization, including annual corporate dinner event with 17 industry representatives
- Developed corporate sponsorship solicitation packet and facilitating relationship between ASBME and corporate sponsors to form a mutually beneficial relationship resulting in $2000 in sponsorship
- Planned general meetings and events for 100+ Biomedical Engineering students

USC MEDesign Medical Device Design Team Executive Board May 2019-May 2022
Funding Chair ('19-'20), Corporate Chair ('20-'21), Vice President ('21-'22)

- Led discussions during 14-member executive board meetings
- Coordinated logistics for interviews of 100+ member candidates
- Planned and facilitated general meetings and workshops for 30+ general members on eight design teams