Rachel Tong

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EDUCATION

University of Wisconsin-Madison

MS in Biomedical Engineering (May 2019)

GPA: 3.7, *Biomechanics and Neuroengineering*

BS in Biomedical Engineering (May 2018)

EXPERIENCE

Neural Interface Technology and Research Optimization Lab ***Jan. 2017-Present***

Research Engineer, Madison, WI

- Designed and fabricated neural electrodes for use in orthopedic prosthesis, deep brain stimulation, glymphatic, and trigeminal nerve neuroscience experiments
- Generated Matlab and LabVIEW programs for robotic control and electrophysiological data collection and analysis
- Performed in-vivo animal experiments including neurosurgery and pre/postoperative animal care

Straits Orthopaedics ***May 2018-August 2018***

Design Engineering Intern, Penang, Malaysia

- Designed and tuned manufacturing process flow to improve and support international projects
- Performed quality assurance testing with various tools to ensure FDA regulatory compliance
- Modeled in SolidWorks and Mastercam to design parts and fixtures for manufacturing processes
- Collaborated with inter-departmental teams including Manufacturing, R&D, Materials, and Regulatory to deliver on project deadlines
- Delivered technical presentations of engineering and manufacturing capabilities to clients

Department of Biomedical Engineering ***Jan 2019-Present***

Teaching Assistant, Madison, WI

- Lead lecture sections for 30+ students and deliver constructive feedback for improved performance
- Develop new course content through integration of wireless communication and API integration
- Conduct and monitor lab experiments to demonstrate current engineering skills including circuits, programming, CAD, and data analysis

ACADEMIC DESIGN

Semi-Active Sports Prosthesis

- Designed ankle sports prosthesis for local transtibial amputee. Responsible for CAD modeling, FEA testing, motion capture and force plate testing, data analysis, and project management. Currently pursuing a patent on the design. **Awards**: TechB2B (3rd place), Tong Prototype (2nd place)

Skin Cancer Detector (Leader)

- Designed a non-invasive probe used to measure impedance across the skin for skin cancer analysis. Responsible for design ideation, circuitry and probe fabrication, and team organization for project completion.

SKILLS

- Java, Python, Matlab, Arduino, SolidWorks, Minitab, R (Statistical Analysis), 3D Print, Microsoft Office