

RACHEL T. WOLD

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EDUCATION

University of Michigan (Ann Arbor, MI)

- M.S.E. in Industrial and Operations Engineering. **Sept. 2016 – Present**
 - Concentration in Healthcare Engineering and Patient Safety.
 - Coursework: *Optimization modelling in healthcare, Linear optimization, Simulation, Cost-effectiveness analysis.*
- B.S.E. in Biomedical Engineering. International Minor for Engineers. Cum laude. **Sept. 2011 – May 2015**
 - Concentration: Biomechanics, Human Factors Engineering.

EXPERIENCE

Graduate Student Research Assistant

Sept. 2016 – Present

Center for Healthcare Engineering and Patient Safety, PI: Dr. Amy Cohn (Ann Arbor, MI)

- Assessed current processes through observation and technology (a sensor/tag system), collaborating with a multi-disciplinary team to optimize patient and provider flow within the Glaucoma clinic at the Kellogg Eye Center.
- Managed a group of five undergraduate students – leading meetings, delegating tasks, motivating, teaching, setting clear goals, and tracking progress – resulting in effective teamwork and experimentation.
- Collaborated with teammates to brainstorm, write, and optimize algorithms to convert raw data to location data, recreating algorithm written by external company, eliminating need for outside consultation or third party involvement.
- Developed simulation of the UMich Health System (UMHS) Central Sterile Processing Department to better inform staffing.

Senior Capstone Design: Identity Recognition Device for Schoolchildren with Low Vision **Jan. 2015 – April 2015**

University of Michigan, BIOMEDE 450, Clients: Dr. Sherry Day & Michigan Pediatric Device Consortium

- Conceived and fabricated, in close collaboration with four teammates, a sensor/tag system using Bluetooth Low Energy beacons and a custom Android phone application to aid students with low vision in identifying peers in social interactions.
- Organized all project responsibilities – ensuring better team unity, adherence to requirements, and progress toward goals.

Undergraduate Research Assistant

Oct. 2011 – Dec. 2013

The Micro/Nano/Molecular Biotechnology Lab, PI: Dr. Geeta Mehta (Ann Arbor, MI)

- Formation of Stable Small Cell Number Ovarian Cancer Spheroids for Individualized Therapy **June 2012 – Dec. 2013**
 - Designed and executed experiments to further technology involved with the *in vitro* culturing of ovarian cancer cells. Maximized work efficiency by managing multiple time-sensitive experiments in forethoughtful sequence.
 - Compiled and analyzed data from experiments to be presented in lab meetings and two official research symposiums.
 - Published in *Gynecologic Oncology*: Raghavan S, Ward MR, Rowley KR, et al. (2015). Formation of stable small cell number three-dimensional ovarian cancer spheroids using hanging drop arrays for preclinical drug sensitivity assays.
- Microfluidic Device for Non-Adherent Cells Capable of Media Recirculation on Braille Perfusion **Oct. 2011 – May 2012**
 - Excelled in delivering quality products, continually improving the complex microfluidic device fabrication process to generate devices of ever-increasing quality while also increasing reliability of device production.
 - Published in *Biomicrofluidics*: Dixon AR, Rajan S, Kuo C-H, et al. (2014). Microfluidic device capable of medium recirculation for non-adherent cell culture.

SKILLS

- Computer Programs: ProModel, LaTeX, Adobe Photoshop, Adobe Illustrator, and Microsoft Excel.
- Computer Languages: experience with Matlab, Python, AMPL, and SQL.
- Certificates: Root Cause Analysis through UMHS. Earned on July 14, 2016; refreshed on June 22, 2017.
Coursera classes through the University of Minnesota: Healthcare Marketplace, Healthcare Delivery Providers, Pharmaceutical & Medical Device Innovations, Medical Technology and Evaluation. Earned April - August 2016.
- Participant in Ann Arbor Health Hackathon: 2016 and 2017.
- Foreign Languages: Proficient in the French language.
- Hobby photographer and videographer.