

EMILY R. BANACH

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OBJECTIVE

To obtain an internship for Summer 2017 to gain industry experience.

EDUCATION

Michigan State University, East Lansing, MI

December 2018

Majors: Biosystems Engineering, Statistics; Honors College; GPA: 3.510

EXPERIENCE

Research Assistant, Michigan State University, East Lansing, MI

July 2014 – present

- Created and cultured petri dishes for plant sterilization
- Analyzed stormwater data collected between 2011-2015
- Generated models to estimate hydraulic retention times based on influent and effluent peaks

Professorial Assistant, Michigan State University, East Lansing, MI

August 2014 – May 2016

- Conducted research in biosystems engineering under Dr. Dawn Reinhold
- Analyzed plant, soil, and water samples through Liquid Chromatography Mass Spectrometry
- Grew and cared for plant specimens to gain basic biological laboratory skills
- Designed experiment assessing healthiness of plants based on stomatal conductance
- Trained to handle radioactive materials in a laboratory setting

Site Leader, Michigan State University, East Lansing, MI

March 2015

Together We Rise

- Lead 40+ volunteers from various engineering fields
- Delegated tasks to multiple teams of 4-5 people
- Constructed bicycles donated to children in foster care

Sampling Technician, Michigan State University, East Lansing, MI

October 2014

- Aided in research regarding the development of a groundwater model capable of predicting transport of chloride plumes
- Collected water samples from various wells in Kent County, Mich.
- Used GPS to document various sites

ACTIVITIES/MEMBERSHIPS

Engineers Without Borders

January 2016 -- present

- Attended weekly meetings and volunteered in community projects
- Generated designs for a rainwater catchment system for an elementary school in Tanzania
- Aided in design and modeling of a slow sand filter for filtration system
- Helped edit and write grants for international projects

Ecological Engineering in the Tropics

December 2015

- Traveled to Costa Rica on a study abroad program in order to learn integral concepts of sustainable engineering
- Designed and implemented a harvesting system for an experimental wetland
- Explored Costa Rican culture and sustainability practices
- Analyzed various anaerobic digestion and treatment wetland system
- Toured coffee and banana plantation and packaging facilities to better understand systems engineering

ADDITIONAL CLUBS

- MSU Herpetology Club
- MSU Tea Club
- MSU League of Legends Club

SKILLS

- Advanced Microsoft Office
- Conversational Spanish
- Basic Python