Kathryn Atherton

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Research projects

Near-term Ecological Forecasting Initiative | Bhatnagar Lab, Boston University | Jun 2018 – Aug 2018

- Used microbial DNA sequence data from the National Ecological Observatory Network
- Developed statistical model in R that predicts composition of microbial communities across space using environmental variables like climate, soil nutrient content, and plant biomass
- Will present poster at Annual Biomedical Research Conference for Minority Students in November 2018

Benzene REDuction THERapy (BREaTHER) | Purdue University iGEM | May 2017 – Nov 2017

- Worked on Purdue International Genetically Engineered Machine (iGEM) team to genetically engineer *E. coli* to degrade benzene in lungs
- Modeled 3D lung environment with rat lungs to determine product's ability to enter and survive in lungs
- Documented all work and ethical, social, and entrepreneurial considerations in a website
- Received silver medal at 2017 iGEM Giant Jamboree competing against 300+ teams in Boston

Education

Purdue University | Biological Engineering | May 2019

- Focus in Cellular and Biomolecular Engineering and minors in Spanish and Biotechnology
- Special coursework includes Principles in Systems and Synthetic Biology | Fall 2018
- Awarded Best Poster for the Purdue Undergraduate Research Symposium | April 2017
- Studied abroad in Madrid, Spain for six weeks to complete Spanish minor | Summer 2016
- Recipient of merit-based scholarships
  - Trustees Scholar | Fall 2015 – Present
  - Gary and Michelle Henriott Scholarship | Fall 2018 – Spring 2019
  - Charles and Carolyn Spillman Scholarship | Fall 2018 – Spring 2019
  - Gruel Memorial Scholarship | Fall 2017 – Spring 2018
  - Larry and Lola Huggins Scholarship | Fall 2017 – Spring 2018
  - John B. Greiner Scholarship | Fall 2016 – Spring 2017
  - Marilyn Dwyer Women in Engineering Scholarship | Fall 2015 – Spring 2017

Skills & Abilities

Biological Laboratory Techniques

- Adept in PCR, DNA extraction, gel electrophoresis and extraction, bacterial transformation, and Gibson assembly
- Accomplished in using literature to develop new protocols when designing biological assays

Written and Oral Communication Skills

- Fluent in English and professional proficiency in Spanish
- Experienced in performing literature reviews to write papers and explore project background knowledge
- Published abstracts, composed technical papers, and delivered poster and oral scientific presentations

Programming

- Practiced in using Python, MATLAB, and C to work through various engineering problems
- Working knowledge of using R to develop statistical models

Leadership and Teamwork

- Contributed to multiple interdisciplinary teams through classes
- Volunteered for leadership positions in various organizations
  - Honors College First Year Seminar Mentor | Fall 2016, Fall 2017
  - Boiler Gold Rush (New Student Orientation Program) | Spring 2016 – Fall 2017
    - Team Supervisor | Fall 2016 – Fall 2017
    - Team leader | Spring 2016 – Fall 2016
  - First Year Honors Engineering Peer Mentor | Spring 2017 – Spring 2018
  - Society of Women Engineers All Member Meeting Chair | Fall 2017 – Spring 2018