**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