

RACHEL MOGLEN

1179 ELB, University of Maryland, College Park, MD 20742

rmoglen@umd.edu

EDUCATION

University of Maryland, College Park, MD

M.S. Mechanical Engineering, GPA: 3.78

Fall 2017 – Spring 2019

B.S. Civil and Environmental Engineering, GPA: 3.68

Fall 2013 – Spring 2017

WORK EXPERIENCE

University of Maryland, College Park, MD

Fall 2017 – Present

Research Assistant for Dr. Steven Gabriel

R, Python

- Evaluating the maximal amount of savings possible through residential HVAC load shifting
- Optimally scheduling demand response events using Stochastic Dynamic Programming (SDP)

University of Maryland, College Park, MD

Spring 2018

Teaching Assistant for Simulation and Design of Experiments

R, MATLAB

- Aided students with course material of simulation of discrete and continuous engineering systems
- Held office hours, wrote and graded homework, and gave two lectures on simulation in R

Whisker Labs, Germantown, MD

Summer 2017

Research and Development Intern for Demand Response Team

Python, R, AWS

- Calibrating Recurrent Neural Networks to predict energy price spikes for real-time decision making
- Tested Demand Response simulation under perturbed conditions to verify its veracity

University of Maryland, College Park, MD

Fall 2016 – Spring 2017

Research Assistant for Dr. Kaye Brubaker

MATLAB

- Developed life cycle model of algae bloom probabilities on the Chesapeake Bay
 - Trained and validated model using cell counts provided by MD Department of Natural Resources
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PUBLICATIONS

Moglen G. E., McCuen R. H., & Moglen R. L. (2018). Consequences of Changes to the NRCS Rainfall-Runoff Relations on Hydrologic Design. *Journal of Hydrologic Engineering*, 23(8), 04018032.

[https://doi.org/10.1061/\(ASCE\)HE.1943-5584.0001681](https://doi.org/10.1061/(ASCE)HE.1943-5584.0001681)

Moglen R. L., Chanpiwat P., Gabriel S. A., Blohm A. (2018). A Dynamic Programming Approach to Optimal Residential Demand Response Scheduling in Near Real-Time: Application for Electricity Retailers in ERCOT Power Markets. (in review)

Blohm, A., Crawford, J., Gabriel, S. A., Moglen, R. L., Wood, D. (2018). An Analysis of Optimal Demand Response Decision Rules for Retail Electric Power Providers: Case Study for the Texas Retail Power Market. (manuscript in preparation)

HONORS AND AWARDS

Engineering Honors Student

Spring 2016 – Spring 2017

- A program focused on experimental inquiry, culminating in an independent research project
- Earned the **Most Outstanding Research Award**

Spring 2017

Banneker Key Scholar

2013 – Spring 2017

- Most prestigious merit scholarship at the University of Maryland