SARAH F. GIBBONS

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EDUCATION

Texas State University   San Marcos, TX
B.S. Computer Science   May 2018
     GPA: 3.0

Texas State University   San Marcos, TX
B.S. Applied Mathematics   December 2018
     GPA: 3.5

EXPERIENCE

Undergraduate Research at Texas State University   San Marcos, TX
Applied Mathematics   January—Present
- Explored whether an efficient algorithm could be developed to determine the zero-forcing number of a graph
- Analyzed families of graphs to derive a formula for finding the zero-forcing number
- Demonstrated that the zero-forcing number is minimal for certain families of graphs [Publication in progress]

Undergraduate Research at Texas State University   San Marcos, TX
Computer Science   June—August 2016
- Researched exhaustive, greedy and recursive algorithms on structured graphs that are used in computing NP-hard graph properties
- Implemented algorithms and performed computational experiments in Python

Undergraduate Lab Assistant at Texas State University   San Marcos, TX
Tutor   June 2017—Present
- Tutored students in C++, Foundations of Computer Science I and II, Data Structures, Object Programming and Design, and Computer Architecture

LEADERSHIP EXPERIENCE

Association of Women in Mathematics (AWM)   San Marcos, TX
President   August 2017—Present
- Lead 20 students who promoted an increased knowledge of and greater interest in the mathematical sciences
- Organized career preparation workshop
- Mentored and encouraged women as they prepare for careers in science and mathematics

Young Mathematicians Conference 2017   Columbus, OH
Speaker   August 2017
- Invited Talk on Zero Forcing and Propagation on Generalized Petersen Graphs

Hack for Change   Austin, TX
Hacker   June 2017
- Applied the Ionic framework, Node.js and Visual Studio
- Created an online marketplace that connects small farmers directly to buyers of fresh local produce

Communication Design Hackathon 2017   San Marcos, TX
Hacker   March 2017
- Wrote Python scripts to extract and consolidate Capital Metro transportation datasets
- Utilized Python to simulate the number of seats available on a bus at each stop

Women Doing Math Program   San Marcos, TX
Problem Solving Challenge, Winner for the Women Doing Math Program   June 2016