SARAH F. GIBBONS

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SUMMARY OF QUALIFICATIONS

- Machine learning, deep learning and scientific programming experience
- Experience with variety of programming languages
- Strong mathematical background

TECHNICAL SKILLS

Programming languages: Java, C/C++, Python, HTML, JavaScript and CSS
Operating Systems: Linux, Windows 10, Mac OS X

EDUCATION

Texas State University San Marcos, TX
B.S., Computer Science *December 2018*
B.S., Applied Mathematics *May 2018*

RELEVANT COURSES

Machine Learning
Parallel Programming
Computer Graphics
Computer Security
Object Oriented Programming and Design
Software Engineering

ACADEMIC EXPERIENCE

Undergraduate Research at Texas State University San Marcos, TX
Applied Mathematics January—Present

- Explored efficient algorithms for computing the zero-forcing number (a fast-mixed search variant in computer science) of specific families of graphs
- Derived a new algorithm for finding the zero-forcing number and implemented the algorithm in C++ demonstrating the new algorithm yields the desired results for arbitrarily sized graphs [Publication in progress]

Undergraduate Lab Assistant at Texas State University San Marcos, TX
Tutor June 2017—January 2018

- Tutored students 15 hours a week in C++ and Java**.** Helped students with programming assignments in the following classes: Foundations of Computer Science I and II (C++), Data Structures (C++), Object Programming and Design (Java), and Computer Architecture (C++)

Undergraduate Research at Texas State University San Marcos, TX
Computer Science June—August 2016

- Researched exhaustive, greedy, and recursive algorithms for computing NP-Hard graph properties on structured graphs
- Produced a new lower-bound on the independence number, an NP-Hard graph invariant
- Used Python to implement the Havel-Hakimi algorithm and Maxine algorithm, https://github.com/sfg11/Graph-Theory-Algorithms-in-Python-2016

PROJECTS

Hack for Change Austin, TX
Hacker June 2017

- Created an online marketplace that connects small farmers directly to buyers of fresh local produce
- Applied the Ionic framework with Cordova CLI, Node.js in collaboration with six other individuals
- Worked on coding the login and sign up pages in HTML, https://github.com/sfg11/FM2U

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

Personal Website

- Used HTML, JavaScript, CSS to create a personal webpage containing portfolio, resume and contact information, https://sfg11.github.io/Sarahs-Website/

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

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