Ashley Helfinstein

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Education

Macalester College, St. Paul, MN — May, 2020
- Majors: Computer Science, Linguistics
- Dean's List Fall 2016, Spring 2017 — GPA: 3.9

Relevant Coursework:
- COMP 261: Theory of Computation
- COMP 221: Algorithm Design and Analysis
- MATH 279: Discrete Mathematics
- COMP 124: Object Oriented Programming and Data Structures
- LING: Several courses in Linguistics
- **UC San Diego Academic Connections:** Intro to Cognitive Science

Homestead High School, Cupertino, CA — June 2016
- Valedictorian — GPA: 4.0
- AP Computer Science (5), AP Physics C: Mechanics (5), AP Calculus BC (5)

Experience

iD Tech Academic Camp — May 2017-August 2017
Instructor
- Taught principles of Game Design with Minecraft to children (6-9 years old)
- Built tools to help with computer setup for all Minecraft instructors
- Recognized as one of the top two instructors on campus

Computer Science Department, Macalester College — January 2017-Present
Preceptor (Teaching Assistant)
- COMP 124: Object Oriented Programming and Data Structures
- Assist in labs, hold office hours every week, grade programming assignments

Little Scots, Macalester College — October 2016-Present
Big Scot (Volunteer Mentor)
- Mentor young girls in St. Paul area who are interested in sports

Activities

NCAA Volleyball, Macalester College — August 2016-Present
- Middle Blocker

She's Geeky Unconference, Mountain View, CA — January 2013, 2014, 2016
- Participated in women's technology event, led and attended sessions

CoderXX Conference, Computer History Museum — October 2015
- Attended inaugural women's coding conference by CodeChix organization

Book Club, Homestead High School — June 2014-June 2016
- Founded and served as president

Skills

Language: Spanish
Computer: Java, Python, IDEs (IntelliJ, PyCharm, Eclipse), Git, some HTML/CSS

Google Engineering Practicum Essay Questions

1. How were you first introduced to CS? How have you continued to develop your technical skills and seek additional exposure to the field?

I attended The Girls' Middle School, an all-girls private school that emphasized STEM education. Every year, all the students take Computer Science classes, and I found that I really enjoyed the problem solving process. This encouraged me to continue with Computer Science through high school, where I took an introductory class and the AP Computer Science class in Java (the only CS classes available at my high school). I also attended several women's technical conferences with my mother, who is a software engineer. Now attending Macalester College, I have continued to explore the world of CS. I have built upon my enthusiasm for technology by engaging myself in CS courses. Last semester I was invited to be a preceptor (TA) for the first course that I took. Through this, I was able to help other students while improving my own understanding and debugging skills. I also have become involved in the Women in STEM program and worked with a senior mentor who is a Computer Science major. The meetings led me to become involved in Mac Hack, which is the software development organization at Macalester. I am hoping to discover if software development is the right career for me.

2. What is your strongest programming language? How much experience do you have using the language? Go into detail about how you used this technical language. If talking about a group project, be specific about your role in the final product. (Examples can include projects, coursework, competitions, websites, previous internships, etc.)

My strongest programming language is Java, which I've worked with since my high school CS classes. In my college Object Oriented Programming and Data Structures course, I worked on a group project to implement a music recognition algorithm in Java. We were given an algorithm, pseudocode and some base classes to build on. I was able to figure out and explain to my partner the "chunking" of sounds by time slice and frequency in the song, and how they were used to get key points and add to our HashMap. Then additionally, I recognized how a longer group of chunks in a row in time would increase the likelihood of a song match. Working with a partner gave me the opportunity to practice pair programming, and I found that I was able to describe what I was doing and thinking while I was coding. It helped both of us understand the code better, especially through these challenges. We spent the week before the project was due working every evening on debugging and we were able to conquer several persistent problems! It was very rewarding to test the project with actual songs and see it recognize them every time.

3. At Google, we believe that a diversity of perspectives, ideas, and cultures leads to the creation of better products and services. Tell us about your background and experiences and how they make you unique.

I have always been a positive person who loves to learn. At The Girls' Middle School, with only 53 other girls in my class, I learned to have a growth mindset and strengthened my love of learning for the sake of learning. I went on to high school, and, after initially becoming too focused on grades without learning from my mistakes, I regained this mindset. It helped in my volleyball career. I started playing much later than most girls, but I still managed to improve my skills quickly and play on competitive teams. In the beginning, I struggled to get playing time, but I used this to make me better. I learned to always maintain a positive attitude, instead of getting defeated. I now compete on Macalester's varsity volleyball team, pursuing a passion. Macalester is a small liberal arts college far from home, but here I have learned how to continue expanding my world-view, meeting people from all over the world. My mindset and fortitude distinguish me. I have learned mental toughness and perspective in my life. I have learned how to not be fazed, and remain positive and supportive of others around me in challenging circumstances.

4. Please list the technical courses you'll be taking next semester. If you haven't registered for classes yet, please list the courses you plan on taking.

I haven't registered yet, but I plan to take:
COMP 225 - SOFTWARE DESIGN AND DEVELOPMENT
COMP 240 - COMPUTER SYSTEMS ORGANIZATION
MATH 236 - LINEAR ALGEBRA

5. Please list any clubs and/or organizations that you participate in.

On the Macalester campus I participate in:
Macalester NCAA Women's Volleyball Team
Women in Science and Math
Macalester Software Development Organization
Little Scots Mentorship Program
Macalester Jewish Organization
Macalester Gaming Society
Macalester Musical Theatre Organization
Macalester Juggling Club (pending approval)