Google Engineering Practicum Internship Application 2016

**Step 1:** Complete 2017 Eng Practicum Essay Questions (each essay should be 200 words or less):

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 went to The Girls’ Middle School, an all girls private school which emphasized STEM education for its students. We all took Computer Science classes every year, and I really enjoyed the problem solving process. That encouraged me to continue with computer science in high school, where I took an intro class and the AP Computer Science class in Java (the only classes available at my high school). I also attended several women’s technical conferences with my mom, who is a software engineer. Now, I am taking Computer Science classes in college, I am involved in the Women in STEM club and have gotten a senior mentor who is a Computer Science major. I am also involved in the “Mac Hack” organization, which is the software development club at my college. I am hoping to discover whether Computer Science is something I would be interested in long term.

2. Tell us about a time you’ve used your strongest coding language. Please 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.)*

In my AP Computer Science class, I used Java to implement a predictor for movie ratings, in the format of the Netflix prize competition from several years ago. We were given a partial data set about movies and users and asked to predict how a given user would rate a movie based on their previous ratings and the movie information. I read input from XML data and converted it to inputs for classes such as Movie and User. I then used loops to extract several pieces of information from the data. I used data caching for the average rating of the movies to make the program more efficient so it would be under the runtime limit for the calculation. To make my predictions, I averaged several relevant pieces of information: the average rating for that movie and the average ratings that user had given to movies based on genre, time period, and in general. I used this to predict their rating. My teacher had a contest to see whose program gave the most accurate predictions when compared to the complete data set. I won a prize for being in the top 3 in my class.

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. In middle school, unlike many who have negative experiences, I had a wonderful, impactful experience. 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 comparatively late, but still managed to play on very competitive teams. Although at times I struggled to get playing time, I used this to make me better, and maintained a positive attitude, instead of getting defeated. Now, I play volleyball on my college varsity team, pursuing a passion. I chose a small liberal arts college far from home. At this school, I expand my world-view, meeting people from all over the country and 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 221 - ALGORITHM DESIGN AND ANALYSIS

or

COMP 225 - SOFTWARE DESIGN AND DEVELOPMENT

and

MATH 279 - DISCRETE MATHEMATICS

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

Mac Hack

Little Scots Mentorship Program

Macalester Jewish Organization

Macalester Gaming Society

\*Your essay responses should be combined with your resume to create ONE PDF ATTACHMENT—this should be added the "Resume Section" listed below.