**Personal, Background, and Future Goals Statement**

**Personal Statement**

It was the spring of 2016, and I was undecisive about which undergraduate institution to attend. But then I learned about Oberlin’s STRONG program – a scholarship (awarded to 8-12 students per year) dedicated to making research opportunities more accessible to students from minority and low-income backgrounds. Soon enough I was learning about research methods in workshops and applying them to a research project in materials physics – a field that was fascinating, intimidating and unfamiliar to me at the time.

Although I gained many research skills through STRONG, I lacked theoretical background to pursue advanced research in physics. Despite graduating as salutatorian of the inaugural class, my education in math and physics was limited due to the shortage of STEM instructors in my high school. However I was able to take advantage of this research opportunity by working on data analysis for another experiment in the lab. So after two projects, a publication, a symposium presentation, and many semesters of grinding, I have paused my explorations with magnetic nanoparticles. But the skills of writing abstracts, preparing and presenting posters, and effectively communicating ideas has persisted, and they became indispensable skills for my upcoming research projects. In addition, the cohort of intelligent and motivated women I met this summer has remained throughout my undergraduate career as we continue to support each other for our various pursuits in academia and beyond. Among this community was one senior researcher who recommended that I take an online course in programming. This initial exposure motivated me to attempt, ace and eventually TA for an introductory computer science course in Python. This interest for computing further blossomed after exploring the subdisciplines of algorithms and human computer interaction.

Curiosity for the latter arose partly from taking a course in cognitive science -- I was both enthralled and slightly overwhelmed by the wealth of interdisciplinary research methods available in this burgeoning field, as well as the insights about human cognition and behavior that these techniques helps us achieve. Thereafter, I declared a cognitive science concentration and started applying to research opportunities in related fields.

These efforts brought me to the 2018 REU program for software engineering at Carnegie Mellon University, where I conducted research on a project with Professors Brad Myers and Aniket Kittur and graduate student mentor Michael Xieyang Liu. Over the summer we worked on evaluating programming tasks and implementing design improvements to the comparison table - a model developed for visually representing information gathered in foraging sessions. After reviewing past literature to understand the objectives of the model, I analyzed its adaptability to more than 200 Stack Overflow questions.

As a sophomore, I was extremely intimidated to work closely with both renowned professors (after Michael suffered a sports injury). learned and practiced many methods typically used HCI. including scenario-based design, sampling techniques, as well as conducting (and analyzing results from) user tests. This knowledge was further synthesized when I formally learned these techniques in HCI the next semester, which proved to be an invaluable asset when conducting real-world user research and designing an interface for Kubernetes users in my internship for IBM this past summer.

**Intellectual Merit**

During my time with REUSE, I analyzed user needs and the compatibility of our mental representation to the information they seek using questions from Stack Overflow. During the process, I wrote about and received a first author publication at the VL/HCC (Visual Learning and Human-Centric Computing) conference. After this initial analysis I learned ReactJS to improve UNAKITE -- a Chrome extension that uses our visual model to support programmers’ information collection process. After making some adjustments to the interface I designed user tests to evaluate the usability of our system.

**Broader Impacts**

In the same way that the STRONG and Luce programs helped pave my way toward research opportunities, I aspire to teach and support future generations of scientists, mathematicians and researches, especially those who come from

Other shit to talk about:

Collaboration during the summer

Teaching in language pedagogy and algorithms

**Support for women and minorities in tech**

As a recipient of the 2019 Clare Boothe Luce scholarship (a private fund supporting women in STEM awarded to one student per annum) at Oberlin and the 2018 CRA-W GHC Research scholarship, I documented the voices of other women in the sciences through recorded interviews. Today, I continue to work on speaking up for my own ideas in male-dominated environments and am starting to seriously consider the causes of and ways of bridging the gender gap.

My liberal arts education has played a crucial role in helping me integrate this amalgamation of identities and my scattered interests into a more coherent whole. Upon entering college, I was a classically trained violinist with intentions of majoring in neuroscience. Even though I did not continue my pursuit of a professional degree in the performing arts, I have learned to transfer the skills of cooperation (from chamber music) and focused improvement (from private lessons) to collaborative and individual undertakings. Meanwhile, I declared majors in computer science and math instead of neuroscience, but have sustained my interest in behavior and cognition through pursuing a concentration in the emerging field of cognitive science.

Moving forward, I aspire to further strengthen my abilities in communication and advocacy. My roles and experiences thus far have taught me the importance of observation, empathy and intentionality in design and execution. In future experiences and endeavors, I hope to continue expanding my understanding of different populations in our society, with the personal goal of discovering more about human behavior as well as the greater objective of using this knowledge to further empower our society.