**To:** Chen Greif, UBC Computer Science Department Head

**From:** Madeleine Leroux

**Date:** January 14, 2019

**Subject:** Proposal for Determining How to Get More Females Enrolled in Computer Science

**Reader Description**

Chen Greif is the University of British Columbia’s Computer Science department head. As a department head, Greif must consider the future as a whole. While determining the goals for the future of the department, Greif could advocate for more inclusion of female students.

**Introduction**

The first computer programmer was Ada Lovelace, an English countess from the eighteenth century. During World War II, women were the first “computers” when technology hadn’t advanced enough to do complicated calculations. A decade later, Grace Hopper created the first compiler. A compiler translates one computer language into another, and is now a staple tool in computer science. These are only a few examples of the contributions women made to the field of computer science.

Until the late 1960’s, computer programming was considered “women’s work”. It was an acceptable field for females -- *Cosmopolitan* *Magazine* even dedicated an entire issue about “computer girls”. However, the prestige of programming grew and women were slowly pushed out of the field. Despite women’s early and significant contributions to the field of computer science, they now only represent less than 20% of computer science students.

**Statement of Problem**

Technology is becoming more and more integrated with everyday life. In a few decades, artificial intelligence could reconfigure how we live and access services. A team that has all the same experiences, tend to design products that meet just their needs. The early airbag is a good example of this. Airbags were built by an all-male team and only tested on males. However, women and children tend to be smaller than the average man. Unfortunately due to their smaller stature, fifty-three women and children were killed by airbags when they were deployed.

**Proposed Solution**

Currently, only 25% of UBC Computer Science degree graduates are women. One possible solution to the problem is changing the public perception of the tech industry. There’s the stereotype that a computer programmer is an awkward male nerd. Some non-profits are now dedicated to reaching out to girls and getting them involved with coding. In fact, Karlie Kloss, a former supermodel, runs one of the most well-known non-profits.

**Scope**

To assess the feasibility of changing the public perception of the field of computer science (particularly at UBC), I plan to explore five areas of inquiry:

1. What is the major factor stopping girls from pursuing an education in computer science?
2. What are the costs of getting more females involved?
3. Does the field contain room for females?
4. Is there demand for females in the tech industry?
5. How to get more women engaged with technology?

**Methods**

My primary data sources will include consultations with both my computer science and non-computer science classmates about their perceptions of the tech industry. I’ll also be asking my female classmates about their experiences in Computer Science, or why they chose to pursue this particular field.

Secondary sources will include publications that address the lack of women in tech.

**My Qualifications**

I am a female computer science student at the University of British Columbia. I started this program in September 2018. As a result, I have firsthand experiences about how women are treated in the computer science field.

**Conclusion**

A 2014 review by the National Center for Women & Information Technology showed that teams including women were more creative, experimental and productive than male-only teams. Another 2009 study showed that gender-diverse teams were better at meeting deadlines and budgets. Clearly, introducing more women to computer science would benefit the field. By addressing the five areas of inquiry mentioned earlier, I can determine the feasibility of getting more women involved with computer science. With your approval I will begin research at once.