

A Course to Prepare Computer Science Students for  
For Employment Interviews  
(Technical Report)

The Gender Disparity in Coding  
(STS Research Paper)

An Undergraduate Thesis Portfolio  
Presented to the Faculty of the  
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In Partial Fulfillment of the Requirements for the Degree  
Bachelor of Science in Computer Science

by

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## Preface

Computer science skills are well known to be in high demand. How can aspiring software engineers and their future employers best serve each other?

A missing component of many undergraduate computer science programs is that students are prepared for the workforce, but not its interviewing process. The students who learned what to expect in an interview, often outperform those who don't. My goal is to design an undergraduate course to teach how to translate students' undergraduate learnings to interviewing skills. I and many of my classmates wished this course existed during our undergraduate experience so far. I set out to research what skills are most tested in most software engineering interviews, and what is the most effective way to prepare students for it. In the end, my course design included a structured syllabus of what topics to teach week-by-week, as well as a sample homework assignment for one of the weeks to be used to base future assignments off of.

Data shows that women are underrepresented in computer science. Their underrepresentation has possibly led to companies' lack of innovations and bias in software. After seeking to learn what is being done about the problem and how productive it has been, I learned that different organizations have stepped up to enhance young females' education experience in computer science, build their confidence in their ability to code, pave paths to teach them coding, and find ways to attain and retain women coders in their institutions and/or jobs. Statistical data shows that the gender gap, although improving, is not closed yet. My findings show that the work being done by various organizations and tech companies has been successful, and more educational institutions and tech companies should follow in their lead to solve the problem.

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