**Missing Women in Tech: The Labor Market for Highly Skilled Software Engineers**

**Abstract:**

This paper examines the behavior of job seekers and recruiters in the labor market for software engineers.

I obtained data from a recruiting platform where individuals can self-report their computer programming skills and recruiters can message individuals they wish to contact about job opportunities.

I augment this dataset with measures of each individual's previous programming experience based on analysis of actual computer source code they wrote and shared within the open-source software community.

This novel dataset reveals that candidates' self-reported technical skills are quantitatively one of the most important predictors of recruiter interest.

Consistent with social psychology and behavioral economics studies, I also find female programmers with previous experience in a programming language are 9.84% less likely than their male counterparts to self-report knowledge of that programming language on their resume.

Despite public pronouncements, however, recruiters do not appear more inclined toward recruiting female candidates who self-report knowing programming languages.

Indeed, recruiters are 12.37% less likely to message a woman than a man with comparable observable qualifications, even if those qualifications are very strong.

Ultimately, neither the labor supply nor the labor demand side is adjusting their behavior with regard to the self-reported technical skills in ways that could increase the representation of women among software engineering recruits.