“Womenomics” and Gender-Inclusive Software: What Software Engineers Need to Know (Invited Talk)

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ABSTRACT

This short paper is a summary of my keynote at FSE’16, with accompanying references for follow-up.

CCS Concepts

• Software and its engineering → Software organization and properties → Extra-functional properties • Human-centered computing

Keywords

GenderMag; gender-inclusive software; software inspection process.

1. INTRODUCTION

Gender inclusiveness in software companies is receiving a lot of attention these days, but it overlooks a potentially critical factor—software itself. Research into how individual differences cluster by gender shows that males and females tend to work differently with software that aims to help people solve problems (e.g., tools for debugging, for end-user programming, for game-based learning, and for visualizing information). However, many features of problem-solving software are (inadvertently) designed around ways males tend to problem-solve.

In this talk, I’ll explain 5 facets of individual differences that tend to cluster by gender, and how they tie to a large body of foundational work on gender differences from computer science, psychology, education, communications, and women’s studies. I’ll also present emerging work on a method we call GenderMag (Gender-Inclusiveness Magnifier), an inspection method that encapsulates these 5 facets into practitioner-ready form. Our field studies in over 20 settings show that GenderMag is effective at enabling software practitioners to pinpoint gender inclusiveness issues in software features—and that software practitioners are finding a surprisingly high number of gender-inclusiveness issues in their own software. We present these results and more, along with tales from the trenches and things we are learning about the competitive advantages, looming pitfalls, and cost/benefit proposition to software engineers for bringing gender inclusivity to software itself.

The GenderMag method has been packaged up into “kit” form, and is freely downloadable:

<http://eusesconsortium.org/gender/>

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