Software Development: Social Impact and Perception

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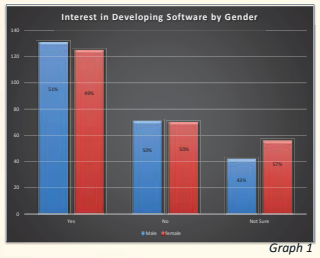
Distinction through Discovery

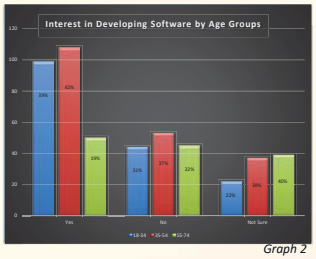
BACKGROUND

- New software technologies are rapidly changing the economy, requiring many industries to integrate them into their businesses. Current technologies changing businesses include social media, smartphone capabilities, and cheaper high-volume data storage.
- These changes have presented problems such as job displacement, high barrier to entry, and a gender gap in the engineering communities.
- This study gathered 501 responses polling views of Americans regarding challenges of software technologies. In recent news stories, it has been shown that there is a gender gap in the tech industry, but the women that participated in our survey are interested in learning software engineering as much as men. Additionally, our research found that younger people are not only required to use software tools more frequently, but are the most interested in learning how to build them. Finally, we found that a large majority of people do not have any experience developing software.

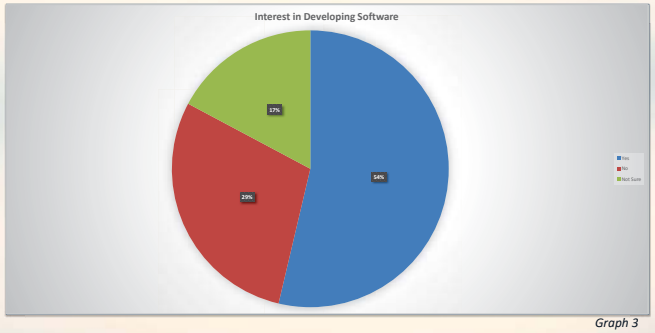
DATA



Graph 1



Graph 2



Graph 3

RESULTS AND DISCUSSION

Based on our results, 33.2% of the population in the age group 18-34, 39.8% of the age group 35-54, and 27.0% of the age group 55+ have interest in learning software development (Graph 2). Therefore, there is a statistically significant difference between age groups and interest in software development, where X^2 (4, n=497) =18.99, p<0.01. This is a weak association where Phi = .195.

Based on our results, 49.30% of the males and 50.71% of females have interest in learning software development (Graph 1). Therefore, this is not a statistically difference between gender and interest in software development, where X^2= (2, n=495) =2.05, p =.359.

Our research highlights some of the key characteristics of software development in society. Despite a stigma about gender bias in software development, our research has found that both men and women are equally interested in learning to develop software. Additionally, our findings highlight the lack of interest demonstrated by older vs. younger generations in learning software development.

HYPOTHESIS

H_o: There is no difference in the level of interest in software development between males and females.
H_a: There is a difference in the level of interest in software development between males and females.
H_o: There is no difference between age and experience developing software.
H_a: There is a difference between age and experience developing software.

DATA AND METHODOLOGY

We designed and developed a questionnaire about software development, interest, and use. 501 samples were collected using Amazon Turk, and the resulting data was analyzed in IBM's Statistical Package for Social Sciences (SPSS).

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