From Curiosity to Career

Why Students Choose Computer Science.



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Abstract

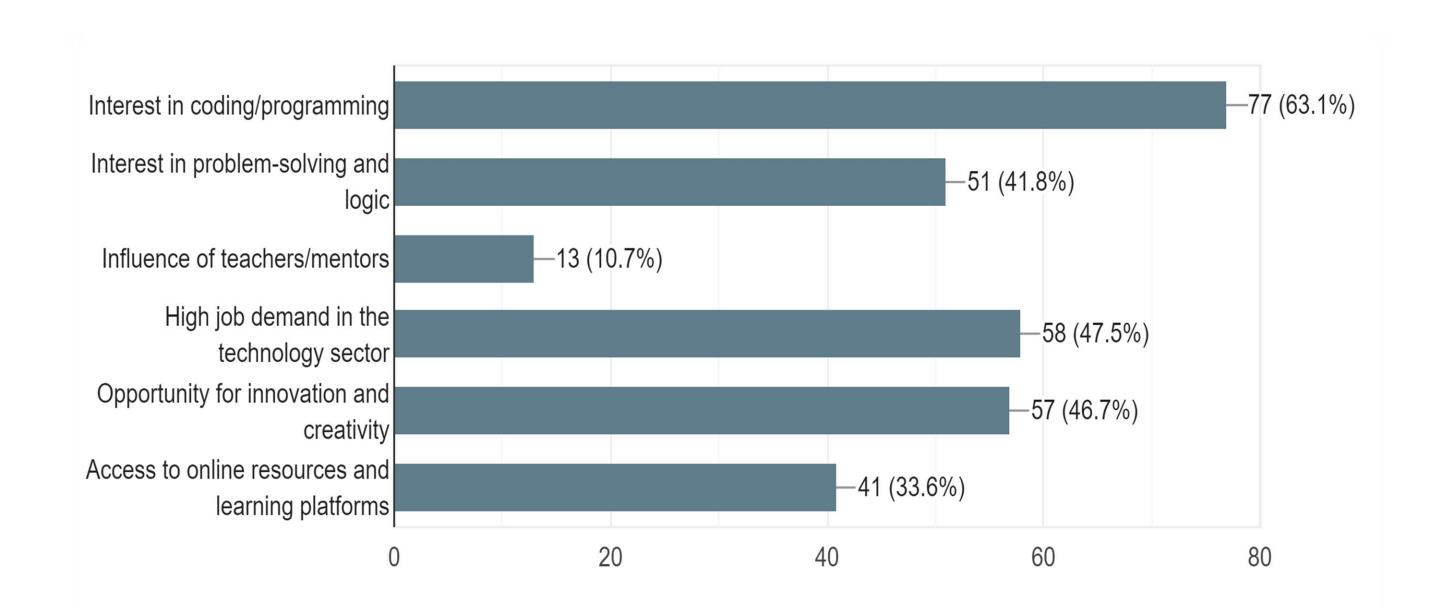
The increasing demand for computer science (CS) professionals has sparked interest in understanding why students choose CS as their undergraduate major. This research explores the motivations behind student's decisions, distinguishing between those who had an initial interest in CS and those who chose it later due to career opportunities. Data was collected through a survey designed to capture factors influencing student's choices. The results highlight key motivators, including personal passion, job prospects, and societal influence. These findings provide insights into improving CS education and addressing skill gaps in the industry.

Methods

This research utilizes a survey-based approach to gather data from students pursuing a CS degree. The survey includes a screening question to categorize students into two groups: those who had an initial interest in CS and those who chose CS later due to external factors. Each group answered questions related to their motivations, expectations, and challenges faced in their academic journey. The collected responses were analyzed to identify common trends and differences between the two groups.

Analysis

Analysis of responses also showed that students with an initial interest in CS were more likely to engage in extracurricular activities such as coding competitions and personal projects. Meanwhile, those who selected CS for career reasons expressed concerns about adapting to programming concepts and industry expectations. These insights highlight the need for tailored educational approaches that support both groups in their academic and professional journeys.

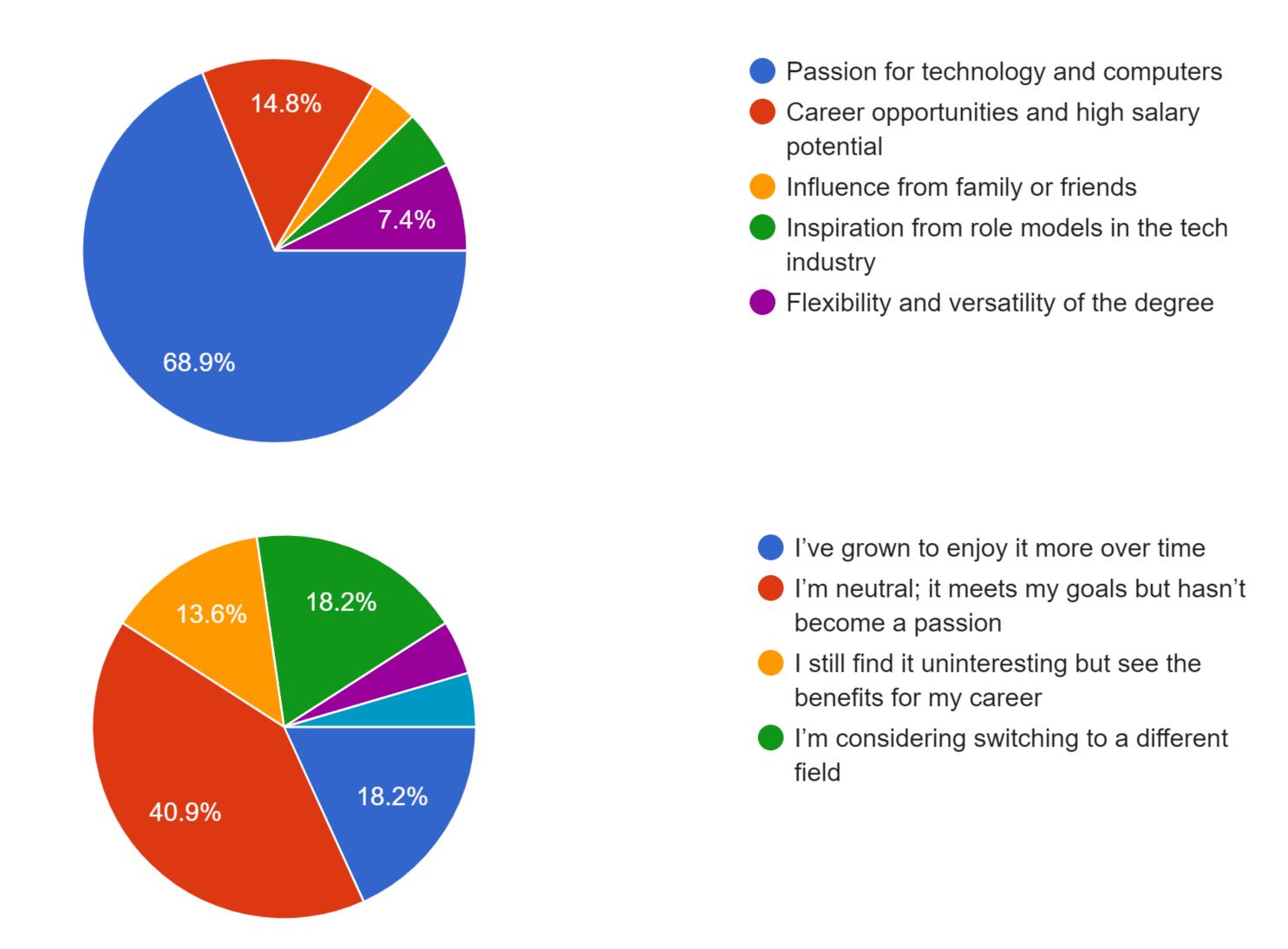


Introduction

Computer science has become one of the most sought-after fields due to its rapid technological advancements and promising career opportunities. However, student's motivations for choosing CS as their undergraduate major vary significantly. While some have a strong initial interest in programming and technology, others are influenced by job stability, salary prospects, or external encouragement. Understanding these motivations can help educators, policymakers, and industry leaders shape future CS programs to attract and retain students effectively. This study aims to analyze the factors driving student's decisions to pursue CS, based on survey responses from university students.

Results

The survey responses revealed distinct patterns in student's motivations for choosing CS. Among those with an initial interest in CS, 68.9% cited personal passion and curiosity as their primary drivers, with early exposure to programming being a significant influence. In contrast, 70% of students who chose CS later pointed to career opportunities and job security as their main reasons. Additionally, 40% of respondents from both groups highlighted the influence of peers, family, or societal expectations in their decision-making process.



Conclusion

The findings indicate that students with an initial interest in CS are primarily driven by personal passion, curiosity, and early exposure to technology. In contrast, those who chose CS later were influenced by job security, industry demand, and financial stability. Both groups acknowledged the importance of skill development and practical experience in shaping their careers. These insights can guide curriculum design, career counseling, and outreach programs to ensure a diverse and well-prepared workforce in the field of computer science.

