

# COMPUTER SCIENCE FOR ALL

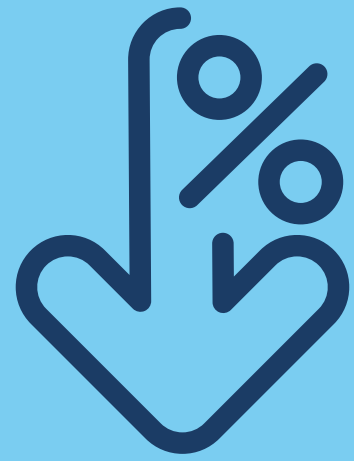
## Closing the Gender Gap

### WHAT IS THE PROBLEM?

22% of the CS bachelor degrees in the U.S. in 2020 were earned by women.<sup>2</sup>

From 2011 to 2020 the number of women who earned a bachelor's degree in CS increased by 3% but the total number of students who received a bachelor's degree in CS rose by over 200%.<sup>2</sup>

Increased gender diversity in the U.S. tech workforce represents a large economic opportunity that could create \$320-390 billion in value for the tech industry.<sup>5</sup>



### THE PROBLEM STARTS IN K-12

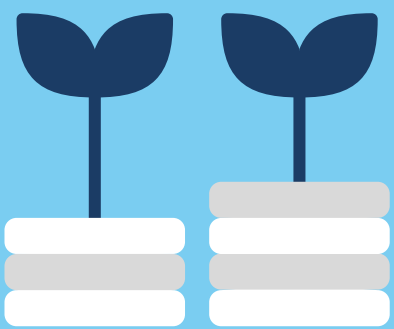
- In 2023 only 28% of high school students in Texas taking a Computer Science (CS) course were girls.<sup>3</sup>
- Underrepresentation reduces girls' enrollment interest in CS classes.<sup>1</sup>
- When girls believe CS is for boys, they are less motivated to take classes and are more likely to think they will not succeed, which becomes a self-fulfilling prophecy.<sup>1</sup>



### WHAT CAN POLICYMAKERS DO?

Computer Science careers are projected to grow 23% from 2022 to 2032. Make foundational CS courses mandatory to help all students build skills for this growing profession.<sup>1,4</sup>

Create policies to ensure CS courses are equitable and relevant for all students.<sup>1</sup>



1 - Master, A., Alexander, T., Thompson, J., Fan, W., Meltzoff, A. N., & Cheryan, S. (In press). Causes and consequences of stereotypes: Interest stereotypes reduce adolescent girls' motivation to enroll in computer science classes. *Journal of Research on Technology in Education*.

2 - National Center for Science and Engineering Statistics. (2023). Table 2-2: Bachelor's degrees awarded, by field, sex, citizenship, race, and ethnicity: 2011-2020. *Diversity and STEM: Women, minorities, and persons with disabilities 2023*.

3 - Expanding Computing Education Pathways Alliance, Code.org, & the Computer Science Teachers Association today. (2023). *Texas. 2023 State of Computer Science Education*.

4 - U.S. Bureau of Labor Statistics. (2024). Computer and information research scientists. *Occupational Outlook Handbook*. <https://www.bls.gov/ooh/computer-and-information-technology/computer-and-information-research-scientists.htm>

5 - Thomas, A., Dougherty, J., Strand, S., Nayar, A., & Janani, M. (2016), *Decoding diversity: The financial and economic returns to diversity in tech*. Intel Corporation and Dalberg Global Development Advisors, New York.