A Statewide Quantitative Analysis of Computer Science: What Predicts CS in Georgia Public High School?

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ABSTRACT

An estimated 35% of high school principals across the U.S. report teaching computer science (CS) at their schools, according to a 2018 code.org access report. Meanwhile, a growing number of organizations have missions of providing computer science to all students in primary and secondary schools. In order to reach all students with CS, we need to understand the choices students, teachers, and schools make regarding accessing CS education. In this poster, we present a regression model that predicts the percentage of students enrolled in a computer science course at a public high school in the U.S. state of Georgia. We choose a single state because the US school system is highly-distributed, so policy and standards contexts differ between states. Using publicly available data sets, we explore what could advance or diminish a school's choice to offer a CS course. Our results show that the explanatory variable that mostly highly correlates with and most strongly influences CS being offered in a school is whether CS has been offered before. The implication is that startup costs and inertia may be among the most critical factors, as opposed to wealth or size of the school district. Median income at the county level and enrollment numbers at a school do affect CS enrollment numbers, but only explain a small amount of the variance. We are currently undertaking qualitative work to understand the idiosyncratic factors that influence schools' decision to offer a CS course.

CCS CONCEPTS

• **Social and professional topics** → **K-12 education**.

KEYWORDS

computer science education, K-12 CS, regression analysis

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