CS Education in Massachusetts

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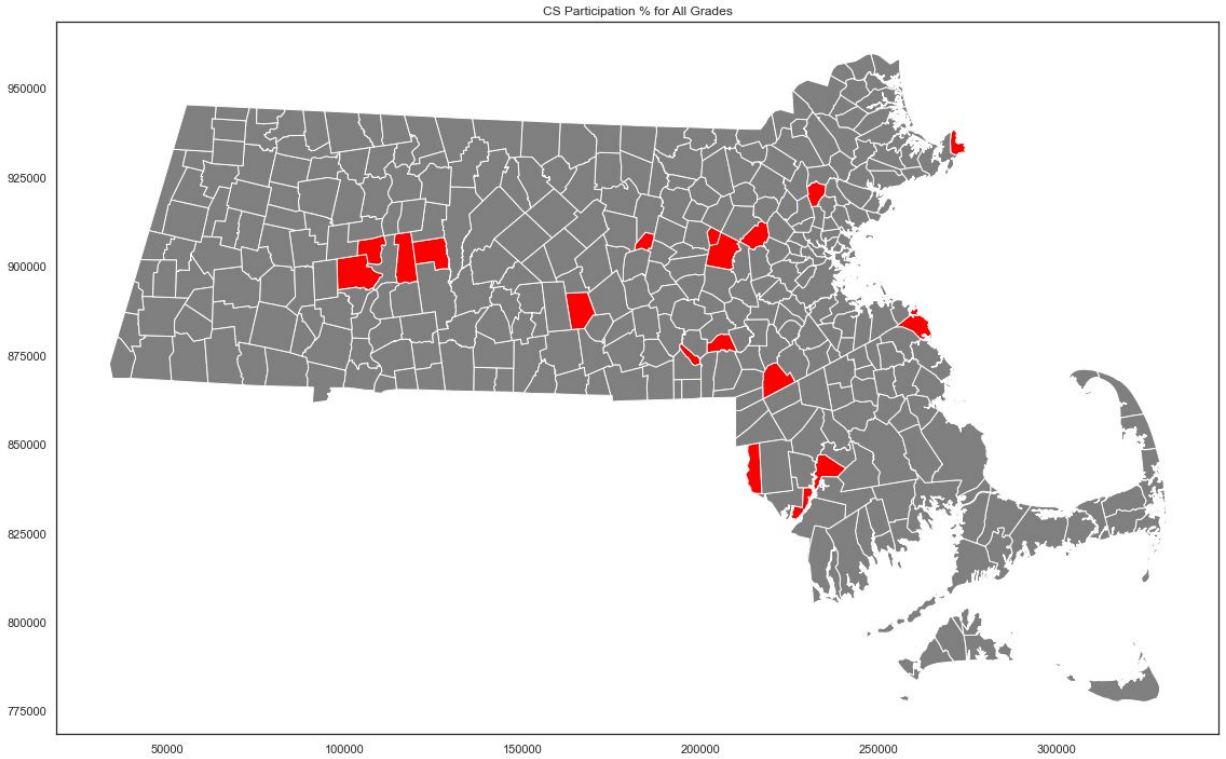
What are the Towns/Areas That Are Doing Well?

These are some of best performing towns/districts which include 'Hatfield', 'Hopedale', 'Clinton', 'Northeast Metropolitan Regional Vocational Technical', 'Somerset Berkley Regional School District', 'Maynard', 'North Middlesex'.

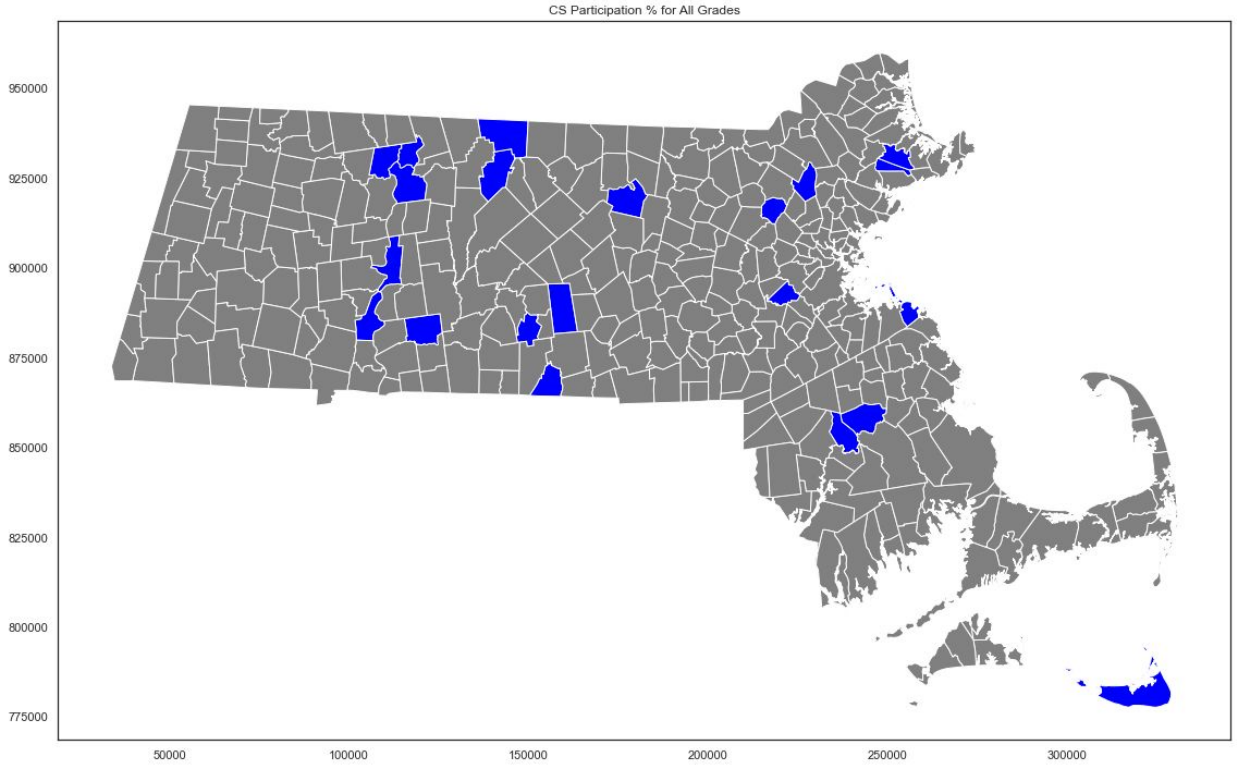
These districts have an average school size of 15k



What are the Towns/Areas That Need Help?

These are some of lest performing towns/districts which include 'Spencer-E Brookfield', 'Greenfield', 'Greater New Bedford Regional Vocational Technical', 'Southbridge', 'Athol-Royalston', 'Gill-Montague', 'Gateway', 'South Hadley'

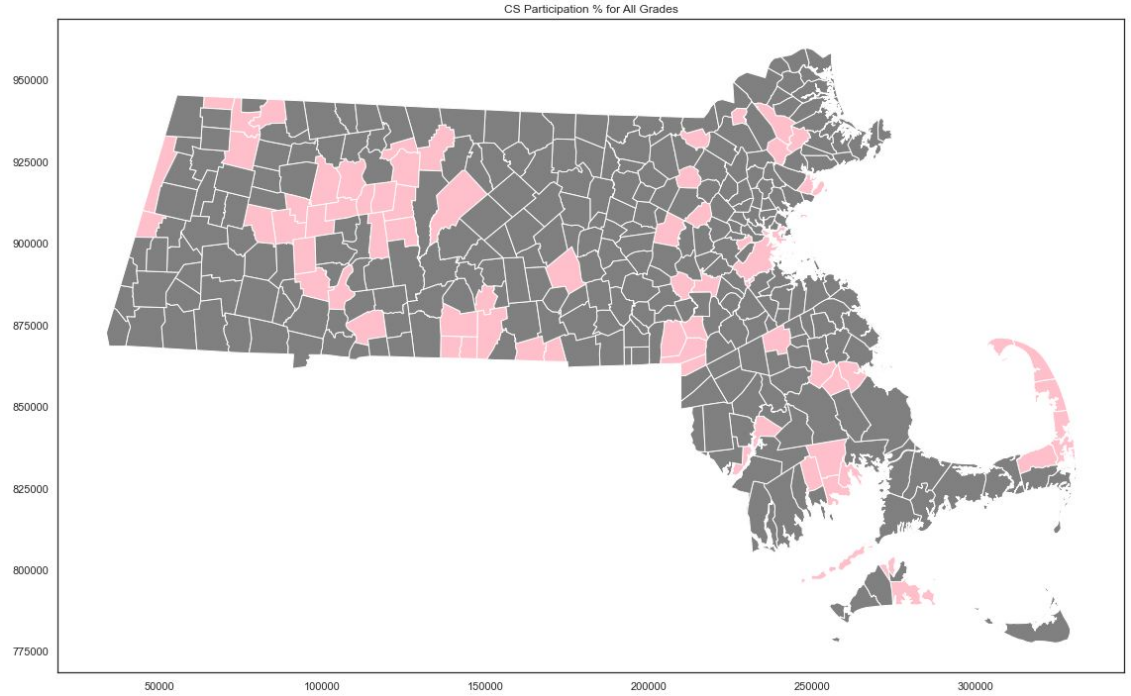
These districts have an average school size of 26k



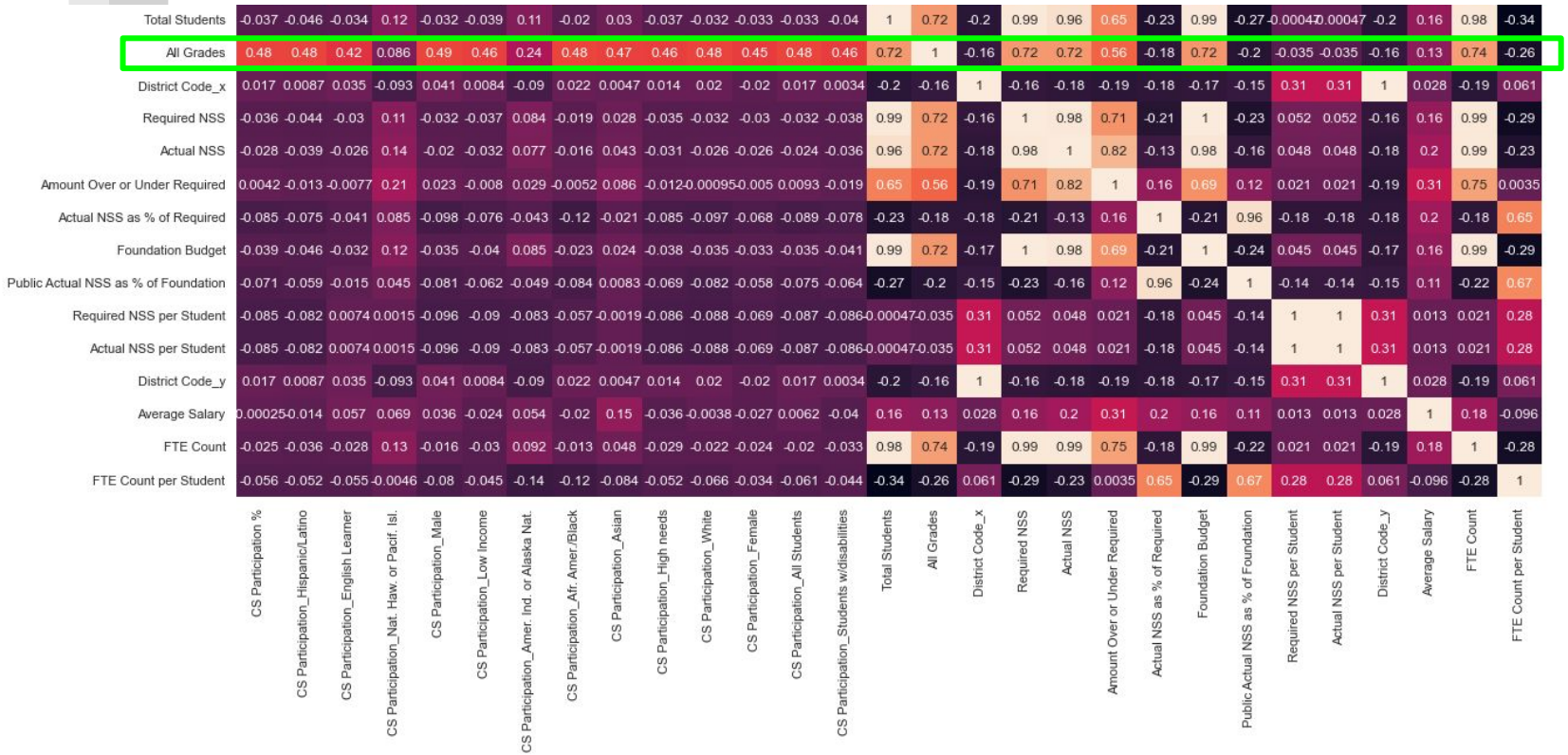
What are the Towns/Areas That Need Help?

These are districts with zero CS participation, 'Acushnet', 'Alma del Mar Charter School (District)', 'Baystate Academy Charter Public School (District)', 'Benjamin Banneker Charter Public (District)', 'Benjamin Franklin Classical Charter Public (District)', 'Boston Green Academy Horace Mann Charter School (District)', 'Boston Renaissance Charter Public (District)'

These districts have an average school size of 4K



Correlation Analysis



What are the Strategies that Must Be Implemented?

- Creation of computer literacy classes in districts where there is little CS education initiatives
- Creation of CS teaching positions at the high school level
- Specifically provide more resources for people that belong to a group that has high needs for quality computer science education
- Another area that could be improved is by providing financial support for students that cannot pay for CS AP exams in order to encourage more students to take and qualify for computer science college credit
- Providing computers and necessary tools for coding to eliminate financial barriers to CS

How Can We Use These Strategies to Target Racial Inequity in CS Education?

- In states like Minnesota, New Jersey, and within Massachusetts already, studies have shown that providing funding for programs that benefit underserved communities have an extremely positive impact
- According to American University, after these states heavily invested in initiatives like raising salaries of teachers, providing general funds for economically disadvantaged students and by investing in school readiness programs, they have maintained very high general standards in comparison to other states.
- Studies have also shown that although states like Massachusetts have generally a strong educational system and that there exists less gap in education than decades ago, therefore the focus should be on the specific programs such as CS initiatives that can increase education, rather than funding schools in general

Individual Contributions

Kelvin Lin: Created the presentation, answered key questions using data gathered during the time period from the last deliverable to this deliverable. Analyzed best strategies for meeting the goals of the project

Sai Tejaswini Junnuri: Created the plots for best and least performing districts and analysed the cs participation with financial features

Changxuan Fan: created web crawler so that the group can extract data from the past years.