# CS 448B HW 1

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## 1 Question

Are more CS coterm students at Stanford choosing a STEM major other than CS for their undergrad?

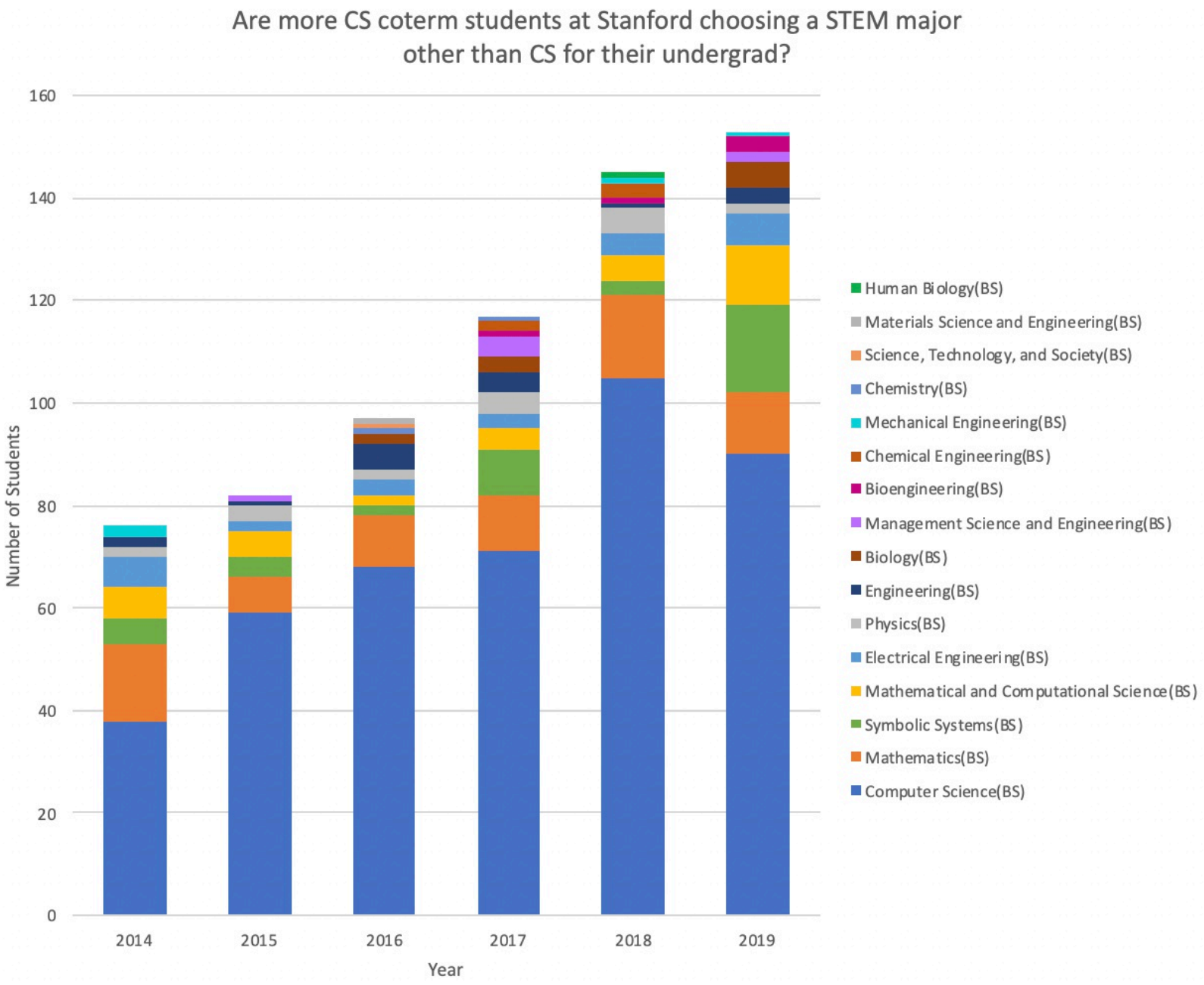
## 2 Transformations

To answer this question, I first removed all humanities majors containing a (BA) tag in Python. Then, I manually split up all of the double major undergraduate students into their respective majors in order to lessen the number of categories I needed to work with and to give a more accurate representation of the number of students choosing a given a major using Excel.

## 3 Design Decisions

I represented each year as a series of colored bars, each representing a number of students in a major. The overall size of each year's bar shows the number of coterm students rising over time, while the distribution of colors within a bar shows how the number for each undergraduate major changes through the years. The order of each bar's colors (top to bottom) is sorted from least to greatest using number of total students in that major across all 6 years. This keeps the order of major colors consistent across every bar and makes it easier to trace the relative growth of each major.

The main conclusions from this visualization are that for the most part, fewer CS coterm students are choosing another STEM major for their undergrad, as the majority of coterm students choose CS as their undergraduate major, even as the overall number of coterm students rises. However, the diversity of undergrad STEM majors does increase, as shown by the number of colors in each year increasing over time.


Are more CS coterm students at Stanford choosing a STEM major other than CS for their undergrad?
160
140
120
100
80
60
40
20
0
Number of Students
2014
2015
2016
2017
2018
2019
Year
Human Biology(BS)
Materials Science and Engineering(BS)
Science, Technology, and Society(BS)
Chemistry(BS)
Mechanical Engineering(BS)
Chemical Engineering(BS)
Bioengineering(BS)
Management Science and Engineering(BS)
Biology(BS)
Engineering(BS)
Physics(BS)
Electrical Engineering(BS)
Mathematical and Computational Science(BS)
Symbolic Systems(BS)
Mathematics(BS)
Computer Science(BS)