CSE 587
Data Intensive Computing

Project 2 Stage3

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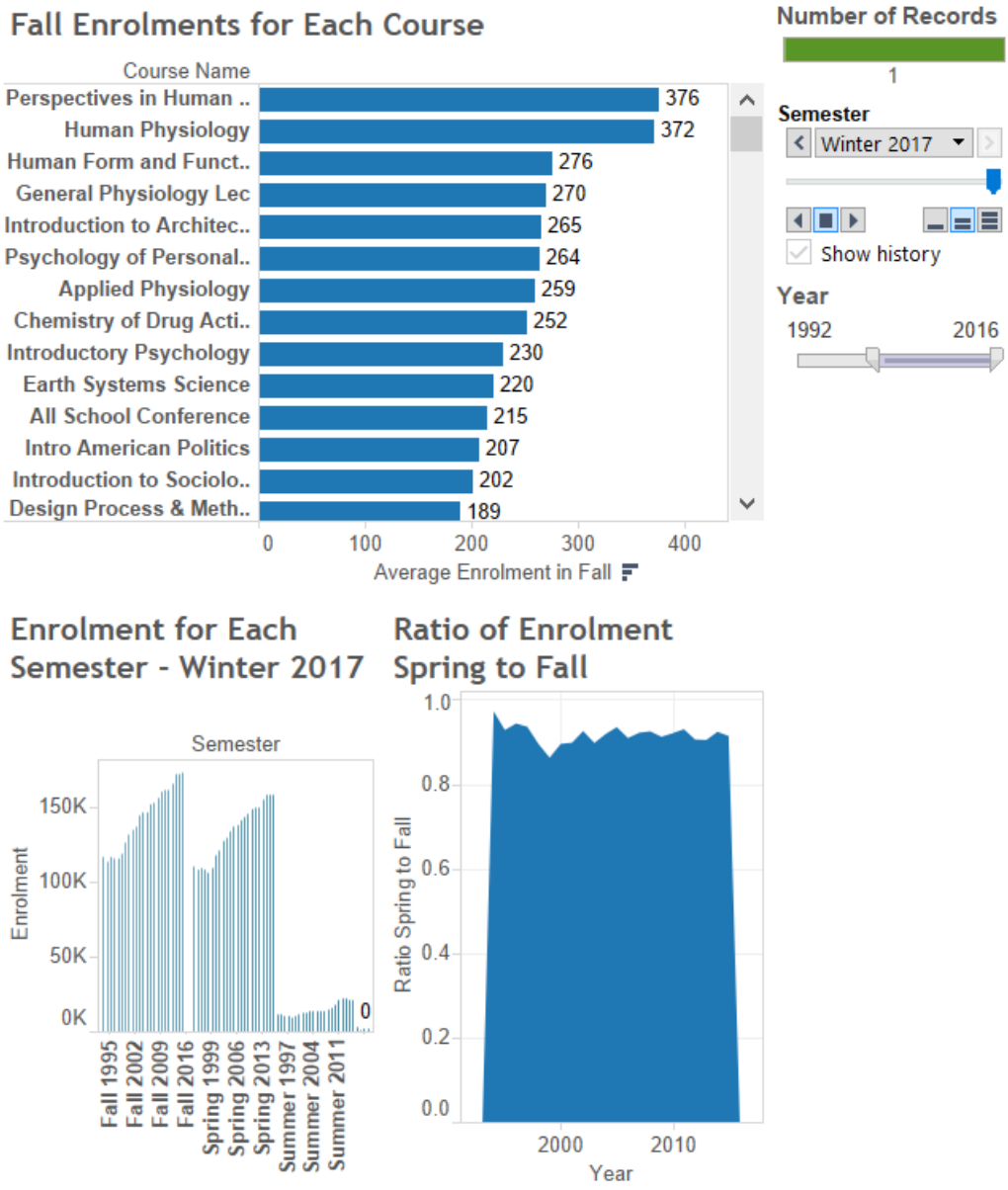
Introduction

The aim of this project is to build dashboards for analysis and visualization of the results obtained through the previous MapReduce phases. Following is the link where we have created and uploaded a dashboard for this part of the project:

https://public.tableau.com/profile/abhinav.sharma2021#!/vizhome/shared/YDMSGBHFR

Analysis

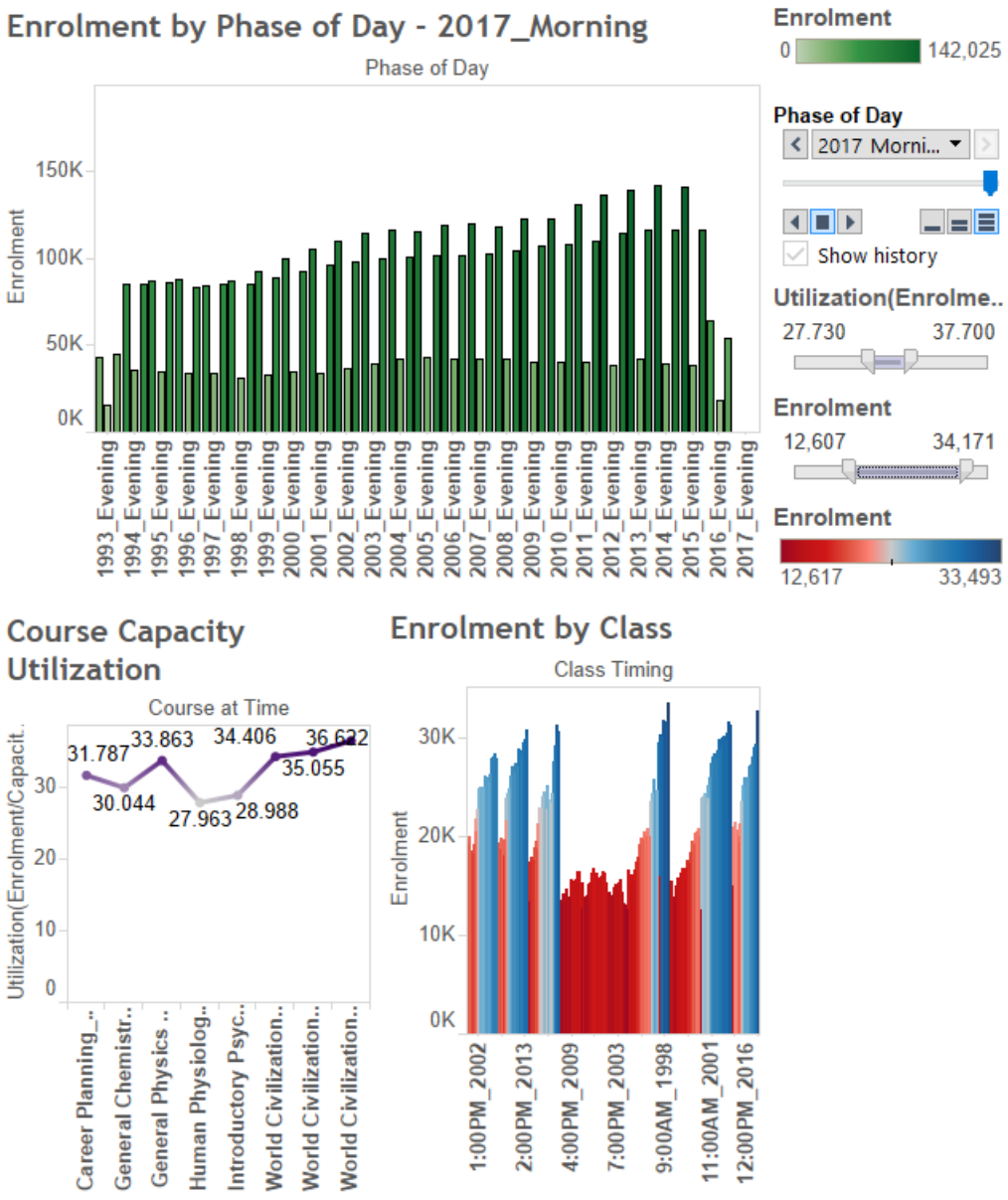
The outputs of the map reduce phase were injected into tableau, to create different dashboards, which help to understand various patterns in the data.



The first sheet in the above dashboard shows the average enrollment of courses for the Fall semester, over the last 10 years, sorted in descending order. This gives a good idea to help plan the room allotment for the courses in the coming semester.

The next chart shows the semester-wise enrollment of students, which shows the gradual increase in the enrollment. This gives a rough estimation of estimated growth of students, and might help in planning for buildings with more capacity rooms.

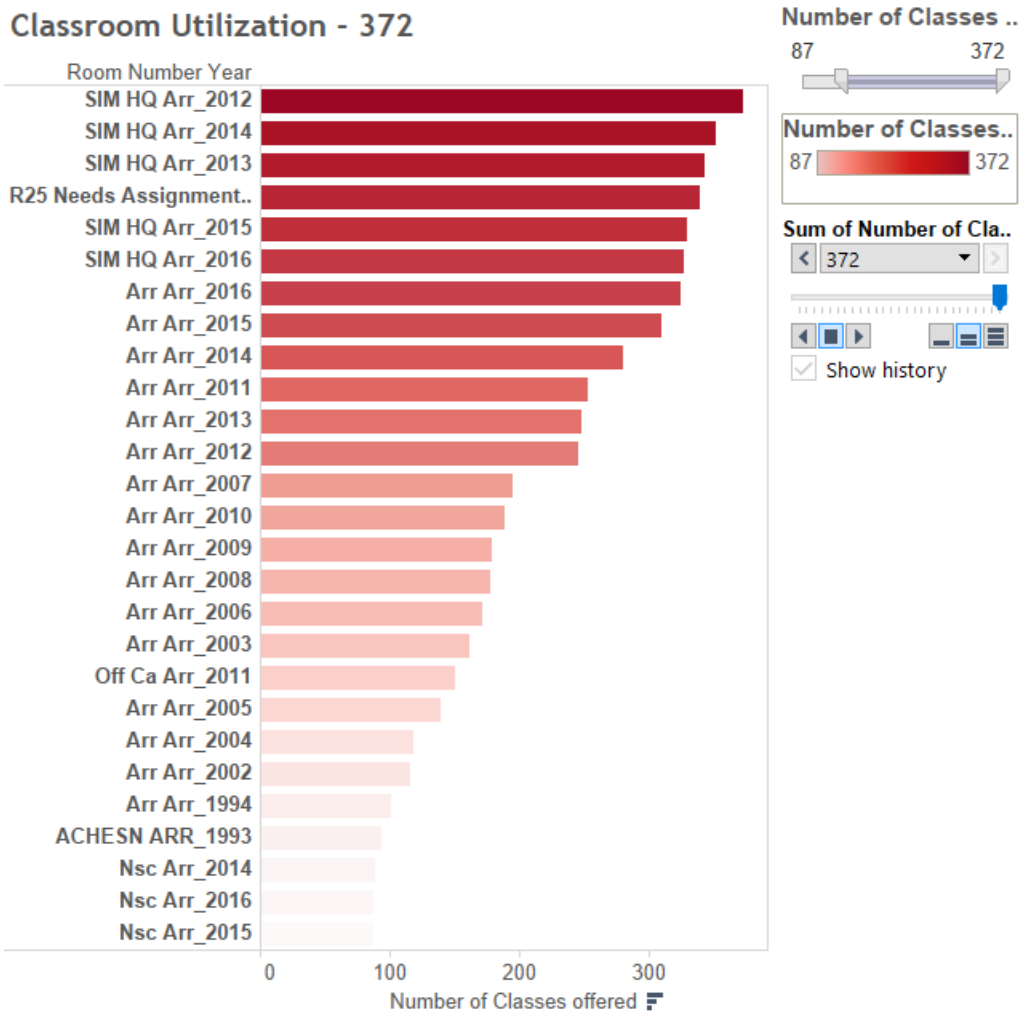
The last chart shows the ratio of Spring enrollment of students to that of the Fall enrollment. It shows that the average ratio is constant over the last 10 years, and we might expect this trend to continue, so that the enrollments for Spring are always lower than that for the Fall.



This second dashboard focuses on enrollment of students and class room capacity utilization based on the time of the day that the courses are offered.

The first chart here shows the enrollment of students based on morning, afternoon and evening classes. We can see that enrollment for evening classes is usually very low, while for afternoon is very high. This information can be used to make sure the classes are more evenly distributed across the time of the day, so that the rooms can be better allotted for courses with high enrollments.

The second and third charts show classroom utilization based on the time of the day, in more detail. This can be customized by using the slider in the above dashboard to get the specific window of utilization and enrollment. This can be used to get the appropriate range of classroom utilization for example, and make sure that those classrooms are better utilized by allotting proper classes to the proper rooms based on the necessity.



This last dashboard shows the number of classes scheduled in all the classrooms each year. This gives an idea as to how uneven the class distribution is, and we can use this to make proper utilization of some of

the less used classrooms. The slider on the side of the dashboard may be used to check the classrooms within a specified window of class utilization.

The lower utilization may also point towards a few problems associated with some of the classrooms, which may be further investigated into.