

Magna Carta

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Literature Review

In the realm of Stanford academic planning, there are multiple now-defunct works related to MagnaCarta (most notably, CourseRank). In the current environment, there are 2 main tools that attempt to act as a tool in helping students decide their academic path. We argue that their usefulness is limited within the process of planning an academic career and thus, there is a need for a new academic planning tool, Magna Carta.

Many tools attempted to fill the void when CourseRank was acquired by Chegg and subsequently shut down. These include CourseCycle (coursecycle.com), Treeviews (treeviews.io), StanfordRank (stanfordrank.com), and Edusalsa (edusalsa.com). These platforms were all created after the removal of CourseRank and all began by seeding the respective app with data that was scraped from CourseRank itself. These various tools allow Stanford students to look up particular classes, see the grade distribution and read reviews about the professor and the class itself. Many students utilized these when attempting to balance the workload per quarter. They were also often used to look up particular classes that would fulfill requirements and were often cited for advice on which class to take. However, these sites rely on self reporting, which as we all know has its own pitfalls with response bias and other flaws that can make the data untrustworthy. Additionally, these sites are simply an extended version of Explore Courses. Beyond providing information about grade distributions and class reviews, they provide no more usefulness in actually planning out an academic career path. While they may be useful in making decisions between specific classes, the barrier to discovery is still relatively high - users must search for specific classes or specific requirements (quarter, units, etc.) in order to view this information. Often, these specifications must be discovered on other sites or through other means.

A more recent tool to join this mission of helping students discover their academic careers is Carta. Carta was developed by a team of Stanford computer scientists under the direction of Michael Bernstein. Carta provides statistical information on Stanford classes based on 50 years of student data. This differs from the above tools, as Carta uses official data from the Stanford registrar, including course grades and instructor evaluations. This negates the issue of self-reported data, as was present in the above

tools. In addition to grade distributions and official course evaluations, Carta provides information about the workload of the class as well as a lists of courses commonly taken before, concurrently and after the course in question. While Carta extends the functionality of the CourseRank successors with official data as provided by the university, it still does little to decrease the exploration barrier. From its home page, users must search for specific class codes in order to access the information. This means that users must have specific classes in mind before being able to see the usefulness of Carta.

We hope to build a tool that completely negates this exploration barrier. Our tool will visualize a student's perspective academic career without having to have particular classes in mind. Additionally, our tool will allow users to look ahead more than 1 quarter (as limited by Carta). With a wider point of view for their academic careers, we hope that students will feel more freedom when deciding the path to take from Commencement to Graduation.

Project Plan

Task	Due Date	Team Member
Pre-process data	Wednesday, May 25	April: receive data and load Kirby: pre-process data to work with our use case
Design iterations	Wednesday, May 25	Gavin
Build backend functionality	Sunday, May 29	April: load data to work with d3 Kirby: create backend graph representation Gavin: begin working on d3 graph representation
Create basic graph	Tuesday, May 31	All members: Piecing together various pieces from the above milestone
Implement interactions and transitions	Thursday, June 2	All members: designing user-friendly transitions and coding them up into d3
Final design tweaks	Friday, June 3	All members: doing final design tweaks for the pure aesthetics of the tool