

Interview with the University Registrar

The University of Utah's registrar office is an office within the university that manages student information, and administrative actions regarding students. Their services range from the collection and maintenance of student records, the scheduling of classes, to evaluation of candidates for graduation. All of these services are tied to data collection and analyzation. To learn more about how the Office of the Registrar functions, I interview the University Registrar and Data Steward, Timothy Ebner.

The Office of the Registrar primarily focuses on the collection of student data. They collect this data to provide a better education and framework for the students attending the University. Student data is stored as a record, and the record starts from a student's application for admission. This includes transferable credits, such as AP and IB scores, one's high school transcript, and is "the fundamental foundation of your data at the University". Once a student is enrolled, his academic achievements, such as courses taken, grades, test scores, certificates and awards, will be added to his academic record. Then this information is stored locally, using a software developed by Oracle, called PeopleSoft. The information is gathered through the student's use of CIS (campus information system), Canvas, and really just their daily academic related actions on campus. The data collected is personally identifiable, since they are student records. However, the Office will distribute the aggregate data when personal information, such as names and SSN's are striped from the data. This is regulated under FERPA guidelines, as well as University policies. The University is also required under FERPA guidelines to notify students that their data is being collected

annually. Students also always have the right to request to review their records, and after up to 45 days, the Office of the Registrar will provide them with their transcript for auditing. Another way students can access their data is through a program named Parchment, which helps students to electronically request their transcript. The main reason the University collects this data is because they are required (again) to maintain a student's academic record forever in their database. However, by collecting student data, departments within the University and the Office of the Registrar can analyze the data, and potentially improve the quality of the experience provided to students at the University. The university can also use student data to perform researches to improve the University, such as looking to improve 6 year graduation rates.

The Office of the Registrar has multiple uses for this data collected by the University. My Degree Audit is one of the programs that uses this data collected by the University. It is located in every student's CIS page, and analyzes the academic data collected. The program helps students monitor their academic program through all the requirements, from general education to the bachelor degree. It includes all of the majors, minors and emphases, and students can see how they are doing in that respective field. This also shows students' progress towards graduation, by reviewing if they've met the requirements for graduation or not.

Another use for the collected data is monitoring athletic eligibility. Student athletes have to meet NCAA requirements, and the Office of the Registrar collects these athletes' data to monitor them. The Office wants to make sure that they are

progress in college, by making sure they take a certain amount of credit hours, pass these credit hours per semester and per year. They also monitor the athletes' GPA, and make sure the athletes has progressed towards a degree in certain percentages. For example, ideally the Office wants to make sure a student athlete is 80% complete with his degree during his senior year, and they achieve this through data collection and monitoring.

A similar use for data is regarding student veterans at the University. These students usually are supported by the Department of Veteran Affairs, and have the G.I. Bill or passed down dependencies to pay for them. The Office of the Registrar tracks the data to provide to the Department of Veteran Affairs, as well for the University's internal use. The University intends on using the data to offer support mechanisms for these students, and to make sure they are transitioning into the University as well as possible.

The data can also be accessed by departments for their own use, as well as for research. The departments at the University have a super user, who can request for data, retrieve data queries, and perform analytics on this data. All of the data is regulated under FERPA guidelines, which is a "what need to know do you have" basis. What this means is the departments only have access to data that is directly related to them. For example, the Department of Art does not have access to any students belonging to only to the Department of Math. When the data is used for research purposes, it is striped of any signs that can be pinpointed to a specific student, then sent to internal offices at the University, such as the Office of Budget & Institutional

Analysis.

In order to keep the data secure, the University and the Office of the Registrar goes through multiple different processes. The University Registrar, Tim, is also the Data Steward, who is in charge of protecting our data, and making sure that the data is not shared with any third party outside of the University. The data steward wants to make sure that externally nothing is leaked, as well as internally, the university is providing all the necessary education and frameworks to keep students' data safe, in a level of integrity, and to make sure students feel like the University isn't selling their data, nor is the University using the data internally in a way that is inappropriate. The Data Steward also wants to make sure the University is kept up on best practices and technology.

The data collected is stored in a software called PeopleSoft, as I've mentioned before. This is stored locally, instead of the cloud. The University has no plans in the near future to upgrade to the cloud, but perhaps in the distant future we will. This is because the cloud version of PeopleSoft was re-implemented, which means that in order to upgrade to cloud, every single bit of data would need to be re-added into the new version of the software, instead of the just updating the old version.

Since the data is stored locally, there are designated storage locations for this data, such as the Student Data Warehouse, which houses the academic records of students that the Office of the Registrar has collected over the years. This is a highly secure warehouse, requiring permission from Tim in order to access. In order to access the data, like previously mentioned, there must be a "what need to know do you have"

reason in order to access certain parts of the data. This chance to get permission is only given to university employees to do their work, which even further increases the safety of the warehouse. Before gaining access to the data, the Office of the Registrar requires employees to take a FERPA test, with questions selected randomly from a test bank, to ensure that the employees are aware of the situation they are in, thus minimizing the risk of the data being leaked.

Once the data is recorded and stored, and is part of a student's academic record, that data will remain in the University's database forever. This includes data such as grades, courses taken, basically anything one will find on a student's transcript in college will be kept forever. However, there is a protocol in the program that deletes student applications for admission after a certain amount of time, as there is no point in keeping this as part of the record.

As we can see, the University pays a lot of attention to the security of students' data. To the day of the interview, there has been no data breaches specifically targeted towards the Student Data Warehouse that were successful, or even just occurred. This is thanks to the Student Data Warehouse only allowing employees to enter, as well as the training that the Office of the Registrar enforces on employees that request to access data.

The use of algorithms stem from data collection, and being such a large organization with large amounts of data, the University of Utah uses algorithms in many of the services it provides. Being part of the University, the Office of the Registrar uses algorithms in a good chunk of their services as well.

The Office of the Registrar does the scheduling of classes across campus, and the assignment of classrooms as well. Currently the Office takes the list of classes from one year ago, and sends the list in a pdf form to each department. Then the departments send the form back printed out, and marked with a writing utensil. This is a tedious process, so the Office is implementing a program to allow departments to submit their list of classes online, where there are rules enforcing the class submitting process. They also plan on adding a waitlisting feature, which allows students to be added to classes via waitlists. Some simple decision making algorithms will also be added in. The Office plans to have the algorithm learn from past years' class sessions and their popularity among students, to predict if they should decrease the number of sessions a class has. They also want to have students to start using the planning tool, which also helps the predictive analysis process. For example, if many students want to sign up for Class 3700, then the Office will know that they should add more sessions of this class, in order to fulfill demand.

The graduation process is also monitored by algorithms. This one is a simple check to see if students meet certain expectations grade wise, and if they have completed the required courses in their majors to graduate. However, if there are special cases that a student needs to get resolved, they are subject to review in the departments that holds the classes the student needs, not the Office of the Registrar. In other words, this algorithm is a Boolean machine, not a smart/predictive decision making algorithm.

One of the more controversial topics we discussed in class regarding education

was the use of predictive algorithms in evaluating student success. The University of Utah and the Office of the Registrar does not currently have anything related to predicting the success of a student installed, however the Office of the Registrar has recently purchased a software called Civitas. This is a software that will analyze a student's performance based on their test/quiz scores, grades, as well as some other details, such as the frequency of their use of Canvas, what pages they stay on most often on Canvas, do they take Canvas quizzes, etc. These details together allow the algorithm to determine whether or not a red flag should be raised for that student, and how likely the student is going to succeed. A lot of the data that will be used is collected from Canvas and other sites the University uses for educational purposes, such as CIS. When collecting this data, all student data is tracked, for example the traffic is monitored, and presumably mouse movements, and such. Everything that the professor doesn't rightly own will be used to analyze the student's likelihood to succeed.

The University of Utah is a large university, and being the Office of the Registrar, there are a lot of responsibilities that the Registrars have to hold, especially those regarding data. Educational data is monitored closely by FERPA, so it is important to make sure the data is secure and safe, and making sure the students feel safe is important as well. I believe that the University Registrar Tim and his Office is doing a great job of keeping our data safe and protected, and is using our data in well monitored researches and analyzations.