

ITRACK2

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1. INSPIRATION

This tool is a POC for a dream to redefine education, inspired by a need for a finite representation of what I had learned in college.

At this point it is a little more than a simple course auditing tool for university degrees. It reaches beyond ordinary tools by attempting to demystify the path to graduate programs and by adding a social element to degree planning. These additional feature were build with underprivileged students attending prestigious universities in mind and their benefits will be described in the walkthrough.

2. WALKTHROUGH

2.1. Auditing Functionality. Here in the first four figures we see the standard features that define an auditing program.

In figure 1 we see the student dashboard with the following responsibilities:

- Give a brief summary of a students aspirtations in the sidebar
- Give a brief summary of a students awards and aknowledgments
- Summarize a students
 - Degree progress
 - Course Completion Metrics
 - Graduation requirements
- House the additional functionality to update course completion by uploading a transcript

2.2. Demystifying Course Requirements. From the landing page you can choose to navigate to a predefined schools list of degree plans

We know that decyphering degree requirements is an added struggle that students don't need to endure, and is a major impediment to underprivileged students success in college.

Thats why we integrated omnipotent degree planning into our application. This means that our application takes into account the courses that have been taken and show the list of courses that need to be taken to complete any degree that a student may inquire about.

Apart from having the degree audits available in this view, a student can add as many

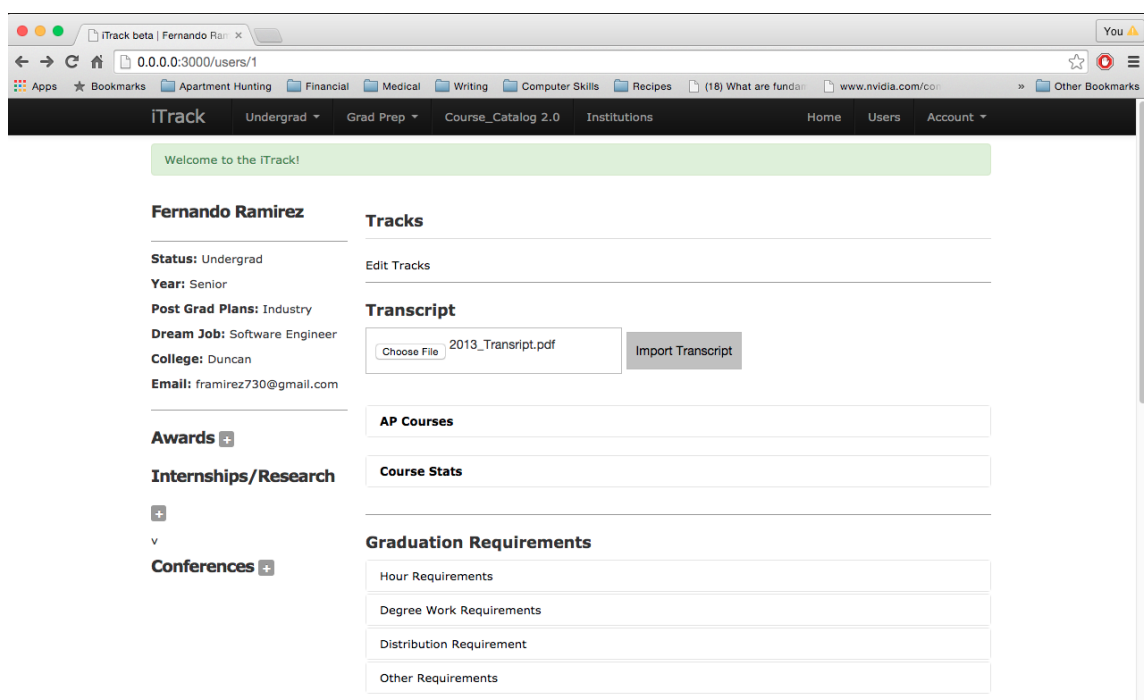


FIGURE 1. Landing page

views as they like to their dashboard, which is a useful functionality for freshman considering a variety of paths and other scenarios described later.

This is the base functionality we were able to fit into the application but additional features in a full fledged application would both incorporate transfer credit into the calculation to facilitate planning study abroad or transfers to other universities.

2.3. Demystifying Graduate Program Requirements. From my experience graduate programs requirements appear clearer to those who have had better resources growing up which seems largely unfair given that they are convoluted but not complex. Our program makes an effort to demystify grad school requirements in our POC by incorporating medical school requirement tracking. At Rice University, aspiring medical students are common, and as a result so are conversations on what courses need to be taken to qualify for what medical schools. Our POC allows a student to monitor the completion of their undergrad requirements for the 9 Texas medical schools, of which we show Baylor College of Medicine.

ITrack	Undergrad ▾	Grad Prep ▾	Course_Catalog 2.0	Institutions	Home	Users	Account ▾
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Fernando Ramirez

Status: Undergrad
Year: Senior
Post Grad Plans: Industry
Dream Job: Software Engineer
College: Duncan
Email: framirez730@gmail.com

Awards +

Internships/Research

+
v

Conferences +

Tracks

Edit Tracks

Transcript

2013_Transcript.pdf

AP Courses

Course Stats

Graduation Requirements

Hour Requirements

Degree Work Requirements

Distribution Requirement

Other Requirements

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Advice to Freshmen

Click here to add words of advice you want to give to any freshman. Things you wish you knew as freshman.

Advice to Peers in my Major

Click here to add words of advice you want to give to anyone with the same major as you.

Unconventional Resources

We know that the internet is changing the way the world works. We want to know if it is changing the way you study or look for resources? Coursera, EdX, Kahn Academy, Codecademy, Massive Online Open Courseware, MIT Open Course Ware, Harvard Open Courses for Free Online Learning Initiative provided by Carnegie Mellon, Stanford Online, TEDx, iTunes U, Peer 2 Peer University, University of the People, Academic Earth, or something else are among the list.

FIGURE 2. Landing page

Apart from showing this summary on this separate view, this can also be incorporated into a student's dashboard, which will prove to be very useful as we will describe later.

Graduation Requirements

<u>Hour Requirements</u>
Semesters Completed: 0/4 Hours at Rice Completed: 0/60 Total Hours Completed: 0/120
Degree Work Requirements
Distribution Requirement
Other Requirements

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FIGURE 3. Graduation Requirement Tracking: Hour View

Graduation Requirements

Hour Requirements
<u>Degree Work Requirements</u>
<p>Complete the requirements of at least one major degree Program.</p> <p>Complete at least 48 hours of all degree work in upper-level courses(300 level or higher)</p> <p>Complete more than half of the upper-level courses in degree work at Rice</p> <p>Complete more than half of the upper-level courses in their major work at Rice.</p> <p>Complete all Rice courses that satisfy degree requirements with a cumulative grade point average of at least 1.67 or higher.</p> <p>Complete all Rice courses that satisfy major and/or minor requirements (as designated by the department) with a cumulative grade point average of at least 2.00 or higher.</p>
Distribution Requirement
Other Requirements

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FIGURE 4. Graduation Requirement Tracking: Degree View



FIGURE 5. Types of Undergrad Tracking

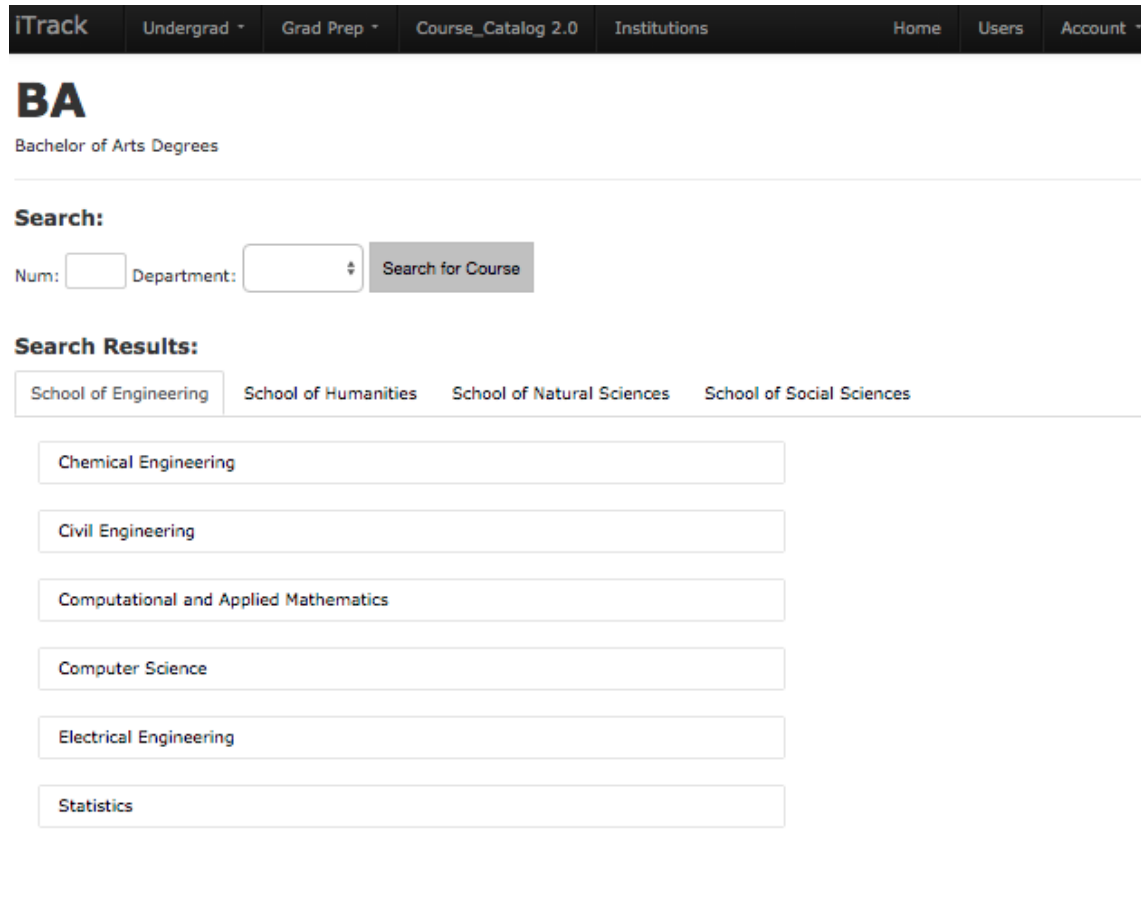


FIGURE 6. Degrees by Type

2.4. Dynamic Course Catalog. Any good auditing website must incorporate a schools course catalog into its site. We were able to do this and take it a step further. Built into our course catalog are two functionalities that make it exquisite

- Ability to see a student progress reflected in the catalog
- Ability to add courses to future semesters

iTrack
Undergrad ▾
Grad Prep ▾
Course_Catalog 2.0
Institutions
Home
Users
Account ▾

BA

Bachelor of Arts Degrees

Search:
 Num: Department:

Search Results:
 School of Engineering School of Humanities School of Natural Sciences School of Social Sciences

Chemical Engineering

General: 0%, 27 Courses Left

Prospected Percent Complete: 0%

Courses Taken: 0
Courses Taking: 0
Courses Will Take:

Core Requirements

Calculus and Diff 0/3

Orgo I 0/1

CHBE Core 0/11

Multi Option Requirements

Free Electives

Notes
 - - -

FIGURE 7. Undergrad Degree View Detailed

iTrack
Undergrad ▾
Grad Prep ▾
Course_Catalog 2.0
Institutions
Home
Users
Account ▾

Fernando Ramirez

Status: Undergrad
Year: Senior

Pre-Med
 Pre-Law
 Pre-Dent
 Pre-Pharm

FIGURE 8. Types of Post-Grad Tracking

ITrack	Undergrad ▾	Grad Prep ▾	Course_Catalog 2.0	Institutions	Home	Users	Account ▾
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Pre-Med

Courses requirements for Medical Schools

Texas

Baylor College of Medicine

Texas Tech University Health Sciences Center Paul L. Foster School of Medicine

The Texas A&M Health Sciences Center College of Medicine

The University of Texas Health Sciences Center at Houston Medical

The University of Texas Medical Branch at Galveston

The University of Texas Medical School at San Antonio

The University of Texas Southwestern Medical Center

FIGURE 9. Pre-Med Requirements per Medical School

The second feature is the most important of the two because having the ability to select courses that a student wishes to take facilitate planning, which when integrated with the social aspect which will be visited next, pressures students to think about their future. I want it also to be noted that courses can also be added to a future semester from anywhere that a course is listed which includes both the degree plan and post grad requirement tracking views.

2.5. The Social Aspect. Though this figure falls short of selling it, we added the ability to see other students profiles if they were deemed public in an effort to make degree planning a social exercise. At Rice, as I'm sure is true of most universities, the people best suited to help you with picking your courses are the students who are going through the process themselves or have done so recently!

For this reason, with privacy considered and configurable, we allowed there to be a view

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Undergrad ▾
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Pre-Med

Courses requirements for Medical Schools

Texas

Baylor College of Medicine

General: 0%, 9 Courses Left

Prospected Percent Complete: 0%

Courses Taken: 0
Courses Taking: 0
Courses Will Take: 0

Core Requirements

Orgo I 0/1

Multi Option Requirements

Basic Chem I: 0/2

Basic Chem 2: 0/2

Organic Lab: 0/1

Organic 2: 0/1

Free Electives

Note

Advisor
Link Page

FIGURE 10. Detailed Pre-Med View: Baylor College of Medicine

where students could look up other students by major, classes and the like. This is by far the biggest selling point of the application, but the one we could develop least due to both a shortage of time and users to test with in our agile sprints. The feedback we received however was mixed which gave us the impression that there was a great deal that could be

ITrack	Undergrad ▾	Grad Prep ▾	Course_Catalog 2.0	Institutions	Home	Users	Account ▾
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Course Catalog 2.0

All

DI

DII

DIII

Dean of Undergraduates

Jones School of Business

Other

School of Continuing Studies

School of Engineering

School of Humanities

School of Natural Sciences

School of Social Sciences

FIGURE 11. Course Catalog

done with this feature to make it useful, but that we would be best suited to investigate the most useful features before continuing.

2.6. POC Honorable Mentions. Before I wrap up, I wanted to say that there was one feature that we were not able to develop in any aspect, and that was the idea of an advisor. In our minds, an advisor isn't just a formal title and responsibility, but somebody that advises a group of students pursuing a specialized path of study. We think that providing a view that facilitates the ability of an advisor to manage their students would be useful for gauging student performance and increasing throughput for universities by reducing the dropout rate. Plenty of other uses can be thought of and I am deeply saddened that I don't have sufficient time to enumerate them all.

2.7. Conclusion. All in all, the development of this POC was very satisfying. It was my first project in an attempt to jump from bioengineering to computer science and I'm glad that it made it as far as it did. Notable successes apart from its development was an offer to make a specialized version of the software for use at the university at a smaller scale

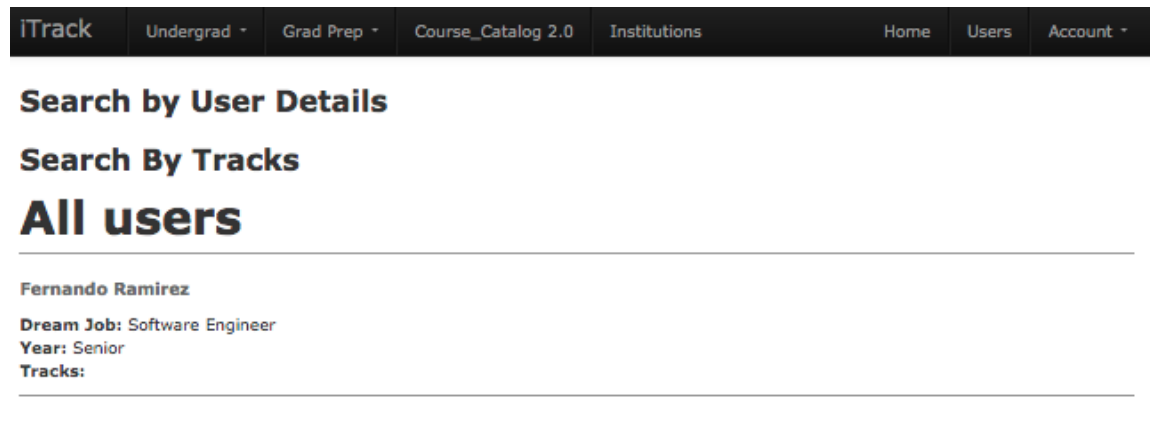


FIGURE 12. User View

than was originally intended. This offer was declined due to time constraints but served as validation of the viability of a tool like this!