Tango - iCampus 2012

Project name: Tango
Contact: Ray Li, ray_li@mit.edu

Need

There are several problems related to course selection at MIT.

1. Planning Courses with Friends

Students like to take classes with people they know. This is helpful for several reasons. A group of friends can easily form study groups, share notes from class, and, for project-based courses, form project teams. Psychologically, it is comforting to know that you have a group to support you, rather than going it alone.

However, the current course registration system does not allow students to see who their classmates are, or to plan out their course registrations together. MIT has a static subject listings page (http://student.mit.edu/catalog/index.cgi), and then a student portal (Websis) where students enter their selections individually.

Students currently address this problem by emailing their friends or entire dorms (which is annoying to some of the population), asking around, or just looking around in lecture. However, email and asking around make it easy to miss people, and looking around in lecture only works after registration has occurred. (Plus, many students don't go to lecture, and in a large lecture hall, friends may not even realize they're in the same class.)

Harvard and Carnegie Mellon already have course registration systems that allow students to see who else is taking a course. It's clear that this service is useful.

2. Getting Help with Coursework

When students are having trouble in a class, they often like to ask friends who have taken the class in the past for help. But, especially for less-popular classes, it can be hard to figure out who to ask. The problem of finding help is exacerbated in classes with limited TA office hours and recitations, such as grad classes.

3. Getting Information About Courses

When looking for information about a course, MIT students can turn to course reviews, or public sites on Stellar (the MIT course management system, which may contains lecture slides and problem sets).

The problem with course reviews is that they consist mostly of numbers that aren't very meaningful for students trying to figure out whether they should take a course. Stellar sites can be significantly more helpful, but some of them are restricted to former class members only.

Furthermore, the official course reviews do not answer all questions a student may have about a class. Students may want to get answers directly from other students, who can answer questions on a more personal level. For example, they can evaluate the difficulty of a course based on having a certain background in the material. The difficulty of a math

course may vary greatly based on a student's level of comfort with number theory. The current course review system doesn't release individual students' comments, so there is no way for past students to directly advise future ones through this system.

Description

Tango is an academic network that connects students to classmates from the start during class registration. On Tango, you can pick your current classes or future classes you're interested in and see potential classmates and teammates also considering similar classes. This lowers a lot of market inefficiencies and barriers to catch missed connections to possible study groups or project teammates. Furthermore, academic planning at MIT can often be daunting and filled with second-guessing. Tango helps students find upperclassmen who've been through similar situations. Each course page has an open Q/A forum where students can find answers to class-related questions and critical advices from veterans. Your social network shouldn't simply be defined by classes at MIT but neither should they be limited by the same classes. Our platform also helps friends plan regular meet-ups like lunch or study-sessions by mapping out their class locations on campus throughout the week, allowing them to figure out a common meeting place.

On the flip side, we envision Tango also providing critical feedback to professors. Using click-history and students' lists of future courses, we can deliver analytics on the demographics of students interested in their courses to professors. This closes the loop between class shopping and curriculum-planning. Also, peer-reviews of each course can give timely as well as pertinent feedback to professors and help them improve the *current* curriculum instead of the *next* one. For professors starting new classes, student-outreach can often be a luxury beyond their means. With a dynamic course-catalog like Tango, they will be able to advertise their curricula to student demographics that might be most interested instead of through informal and inaccurate channels like mailing lists or poster-boards. In the future, Tango intends to match as perfectly as possible student interests to relevant classes and make course-shopping much more accurate and efficient than scrolling through long lists of mini-descriptions.

Impact

We envision Tango building a healthy social community at MIT focused around academic life. We want to transform the often alienating and intimidating lecture environment into a more intimate community of mentors and classmates by starting with online class-shopping.

Tango will demystify the giant course catalogue at MIT. Students will have access to peer-comments, questions/answers, and ratings on each class as well as connections to class veterans who can offer mentorship and answers. This will make class shopping much more transparent and accessible. Tango will streamline the process in which students get live feedback and answers to any questions they have on a particular course or department from peers and veterans. Both students and professors will get a more qualitative review of courses in the catalog instead of standardized ratings. Professors can use these analytics to improve their curriculum as they teach and can focus on issues and concerns unique to their classes and demographics instead of overly generalized, stale ratings at the end of each semester.

Professors will get feedback on the level and breadth of interest in their courses well before they settle on a curriculum. This way, they could tailor their topics and requirements to match the changing demographics of each incoming class. New classes at MIT often lost in the course catalog can now advertise to interested students on the side of the website and gain missed connections with students scrolling through long pages of registrar.

Tango will create a robust social class market to replace the old static course catalog. The increase of dialogue between classmates combined with more pertinent course peer-reviews will strengthen the social community at MIT and add transparency to course evaluations and academic planning.

Scale Up
To make the site sustainable semester after semester, we need access to the database of course information that supports the official MIT Subject Listings (http://student.mit.edu/catalog/index.cgi). We obtained our current data from scraping and parsing the HTML from this site, but this process is imprecise and very sensitive to changes in the user interface of the site.

In our prototype, we have implemented course registration and social connections. Students can search a modified version of the MIT course listings--which shows which students are taking each course--and add courses to their Current Registration, Past Courses, and Course Wishlist (courses to take in the future). They can also search for friends on the site, add these people as "friends" (Facebook-style), and see what courses their friends have listed. Finally, the site currently has an app that allows students to plot their courses and their friends' courses on a map and see where they might bump into each other on campus.

From March through April, we plan to implement the rest of the functionality - including Quora-like course reviews, course recommendation system, and professor-facing analytics.

Finally, we will need to acquire users. Since the current semester has already begun, we foresee the best time to launch this site to be Fall 2012. We can also consider launching as early as May 2012, to allow students to write course reviews for Spring 2012.

Team
- *Ray Li*, MIT Class of 2012, B.S. Computer Science and Electrical Engineering
  - Back-end / UI
- *Jessica Lin*, MIT Class of 2012, B.S. Computer Science and Engineering
  - Front-end / Back-end
- *Sarah Rumbley*, MIT Class of 2012, B.S. Computer Science and Electrical Engineering
  - Organizer

License
GPL

Working Prototype
ray_li.scripts.mit.edu/tango/
Create a new account, or log in as:
username: judges
password: admin

Software requirements and dependencies
Our site is best viewed in the latest versions of Firefox and Chrome.