6.170 Software Studio
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TIM in a Suit: Problem Analysis
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TIM in a Suit

Motivation:

TIM in a Suit is an online application aimed at facilitating the sharing of job interview and internship experiences among MIT students. Students can share their interviewing experience with particular companies, how they got their interviews, how their experience working for the company was like and what study materials they thought were most useful in their work / interview. It is a platform to build a social jobs and career community for MIT students to get help from other students and share knowledge of the MIT-specific application processes for companies. It does not help students apply for jobs/ internships or track their applications, but it provides relevant links and information to help them with the process. Have an upcoming interview, but no one you can ask for advice? Fear not, TIM is in his suit and will be answering all your questions.

Purpose:

1. **Enable MIT students to share their MIT-specific experiences interning and interviewing at companies and ease the job application and interview process.** TIM in a Suit is by MIT students for MIT students. What are the MIT classes / websites / materials that were useful to students during their interview or during their internship? How is the culture at company XYZ like and how different is it from MIT's culture? What to expect from the recruiting process? What were mistakes you made during your interview that you hope others will not repeat? Companies may have specific interview processes for MIT students that differ from the general experiences detailed on Glassdoor or other job-related websites. TIM in a Suit aims to be the place where students can share their numerous interview experiences in one convenient place so that MIT students will benefit from understanding the interview process from an MIT perspective. TIM in a Suit also provides a social environment where people can help each other through their own experiences.

2. **Provide general ratings about companies and their interview process.**
   Companies / the general public may see star ratings of a company on TIM in a Suit,
   but they will not be able to see any of the comments that students have made about
   them. Furthermore, it would make it easy for students to compare companies
   across several criteria, including overall rating or interview experience etc. TIM in a
   SUIT would help MIT community members make the best decision they can by
   helping them weigh the pros and cons of the different areas of the companies
   they're interested in based on other people's reviews.

3. **Improve networking connections by becoming a bridge between MIT
   members.** With the help of TIM in a SUIT, MIT members would extend their
   research and connections and would be able to make well-informed decisions on
   their choices. They can get valuable, industry-wide perspectives not just of their
   target company, but also of other companies in the same field or the work they want
   to do with the help of other users. By encouraging communication between
   members, TIM in a SUIT would also encourage mentorship between members.

4. **(Potentially) Provide opportunities for companies to post internships/ jobs
   to connect with students.** TIM in a Suit aim is to be a resource for students, so it
   may also be a suitable platform for companies to offer job opportunities there.
   Members could share detailed information about the companies that they founded
   or currently working for and advertise and inspire entrepreneurship in MIT
   community.

Context Diagram:
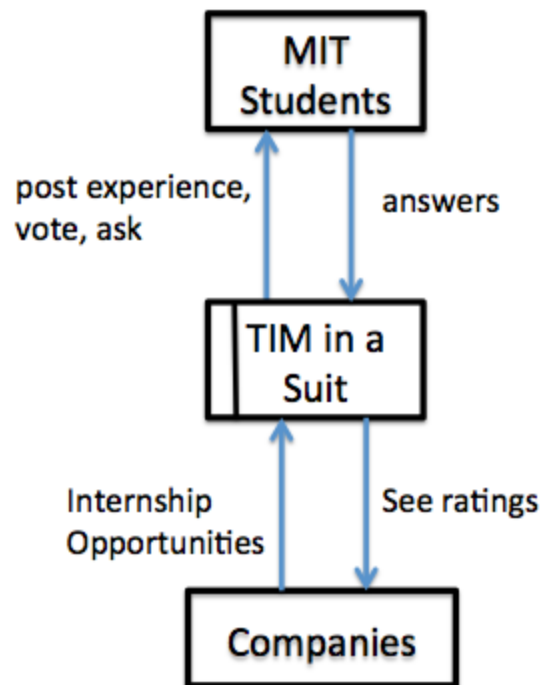
Concepts:

● **Authenticated user:** Authentication is through MIT certificates only, meaning that only current MIT students are able to access TIM in a Suit. This creates a safer environment and reliable experience for students to share their honest opinions about their internship-finding experience and their advice to others. [purpose 1 & 2]

● **Experience:** An experience is at least combination of a post of describing a student's internship/interview process, and a star rating of the company/company's interviewing process. In addition, an experience may contain suggested list of study material. The advice that upperclassmen can give lowerclassmen is valuable in helping them not make the same mistake. Together, by sharing the experience everyone has had / pooling all experience resources (either in by rating the company, sharing a post about their experience there or even by discussing the company culture), students should be able to be more well-prepared and hence, less stressed. [purpose 1 & 3]

● **Voting:** Students can either vote a posted comment up or down to show if they agree/disagree with the comment. [purpose 1 & 2]

- **Rating:** Rating of a company based on difficulty of questions, time when offer / rejection was communicated etc. [purpose 1 & 2]

- **Beaver Call:** Direct messaging feature to enable users to communicate with reviewers for further advice. [purpose 1]

- **Tool box:** Reference to study material or specific topics or classes that a reviewer found useful when preparing for the interview. [purpose 1 & 3]

- **Question:** A post that the user wrote as a general recommendation or a question. It could be related to a job application or study materials or specific to a particular company. It may have more than one answer. [purpose 3]

- **Answer:** Related to at most one Question and it may be voted up/down. [purpose 3]

Design Challenges

1. Allowing Anonymity? Some students may be more comfortable posting their experiences by being anonymous. However this may not be required since TIM in a Suit is limited only to the MIT community.

Potential Solutions:
- *Do not allow anonymous posting or voting*. This may lead to a significantly less people posting / sharing their experiences on TIM in a Suit. In addition, it may lead to a compromise on the level of honesty users are willing to share about their experiences. However, it would make it easy to contact the original author of a post offline or tagging them to ask more about their experience, which is one of the main purposes of TIM in a Suit.
- *Allowing anonymity with no method of contact*. People usually tend to post anonymously because of a fear of retaliation that would come down of the particular company if the true author gets known. Therefore, students would likely be more comfortable to post their experiences in this case. However, it gives students no chance to ask a more private question to the author of the experience or find out if it is someone they know in their class that they could directly ask.
- *Allowing anonymity, but implementing an internal messaging system*. This would be an ideal solution that would give students anonymity, but allow others to private message the author with questions or requests to meet up. However, this would be

more troublesome to implement a private messaging system that guarantees the author's information will not be leaked until the author gives consent to meet with the asker.

2. Creation of user accounts or just provision to email? In the case that a user wants to contact a review for more information, should there be a direct messaging service or should user simply send email using kerberos?

Potential Solutions:

- *Setting up user accounts on TIM in Suit*. This would be advantageous because will not have to rely on any external services to enable communication between users. The issue with this however, is that users will have to visit the website in order to check if they have new notifications / messages which not likely to happen quite often thereby resulting in late response times.
- *Sending messages via email.* The advantage of this is that there is no longer a need to setup a user messaging service. Our system would simply provide a link to a users email address. The problem with this is that some users may not want to have their email addresses made publicly available for fear of being spammed etc.
- *A middle ground solution would be to setup an internal user messaging service that notifies a user via email whenever they receive a new message / email.* The email could just be a plain "You have a new message" notification or it could have the name of the sender and a short excerpt of the question.

3. How to authenticate users? How should we choose to keep the access restricted within MIT community and make sure to not show the reviews to outside source?

Possible Solutions:

- *Requiring valid MIT certificate.* Would guarantee secure connection and restrict the access to current MIT students, faculty members, staffs or affiliates with valid certificates. Nevertheless, it could be very hard to implement.
- *Using a built-in email validator and check that it is the form of @mit.edu.* Could be easier to implement compared to requiring valid certificates. It may be less secure than using MIT certificates.

4. Restricting access: to only current MIT students or to alumni and staff too? TIM in a Suit is meant for the MIT community, mainly the current students, but does that definition include alumni and the staff / researchers / professors?

Potential Solutions:
- *Only students.* Reduces the danger that an employee of a company would be able to see the full review of their company (alumni working for the company), which would compromise the idea of creating a safe environment to post honest experiences. However, it also prevents alumni from contributing their valuable experiences working for a particular company and advice they might have for current students to prepare for work while at MIT.
- *Students + alumni + staff see the same version of the app.* Employees of a company (MIT alumni) may be able to view the ratings of their company. Alumni can contribute to the experiences and voting. However, this may bring a new authentication problem, as alumni may not have MIT certificates anymore if we want to implement MIT Certificates authentication.
- *Students + alumni + staff, but see different versions of the app.* Need to decide on what content to show each user based on their status. There is now an extra challenge of showing enough to alumni so that they can contribute, while not letting employees see their company reviews. Furthermore, it could be hard to differentiate the students, alumni and staff.

5. What kind of rating system to use. Companies and their interview processes can be rated in TIM in a Suit, what kind of rating system would work best?

Potential solutions:
- *5-Star Scale.* A normal 5-star scale. Users have a choice of 1, 2, 3, 4, or 5 stars (integer only, no half-stars). Pros: traditional method familiar to most users. Cons: limited choice for users. It may be good for rating, depending on how detailed we want ratings to be.
- *10 Point Scale.* This allows for a greater range of ratings but with that comes less accurate ratings because a good review on a 5 point / star scale would be a 4 say where as it could be either a 7, 8 or 9 on a 10 point scale.
- *Weighted Rating.* Based on how reliable a user is (measured by the number of upvotes they have in total), their ratings would hold less or more weight in the calculation of the final displayed rating. Pros: should return a more reliable rating. Cons: Much harder to implement and we would have to come up with an algorithm for calculating the ratings.