

## The Team

**Mahir Kothary:** International Liaison (user researcher)

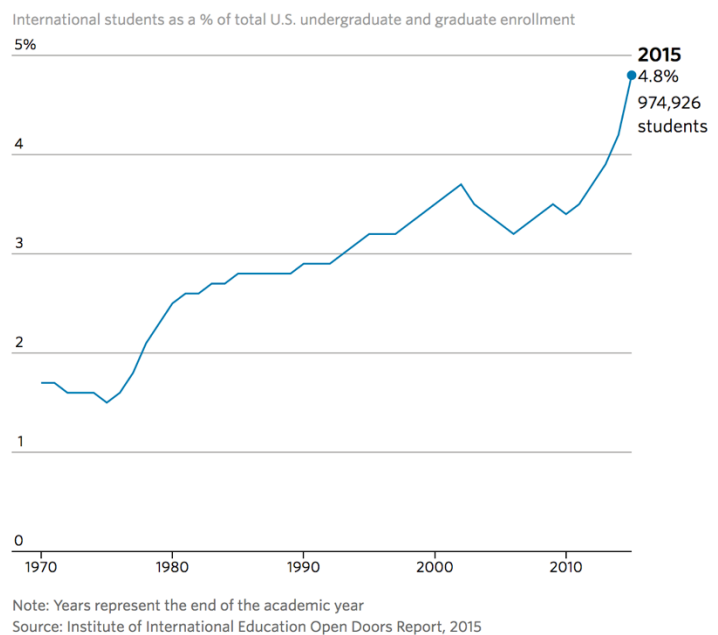
**Rakib Mirza:** Token Creative (sketcher)

**Erin McAweeney:** Savvy Communication Specialist (writer)

**Amanda Chalfant:** Director of Internal Affairs (project manager)

## Problem and Solution Overview

The population of international students traveling to the U.S. for college is rapidly increasing (see graph on the right); at the same time, political tensions surrounding immigration issues are extremely high. In this chaotic and polarized time, international students can have difficulty in finding correct, reliable, and unbiased news information. Furthermore, once news is found that a user considers trustworthy, they must struggle to understand how to apply that information to their own personal situation. While the UW International Student Services provides up-to-date information for students to help make sense of



policies that affect them, there is no clear pipeline for trusted information for updates from ISS advisors and trusted legal sources to reach students in a timely and effective manner. This often leaves international students to consult non-credible information online and more susceptible to believing rumors among friends. Our proposed solution design for this problem involves a filtering system that connects information holders (ISS advisors, legal aids, etc.) with information seekers (international students) based on personalized specifications. By getting a student the exact information they need, nothing more and nothing less, they can feel more at ease in a hectic information environment and focus on other priorities. Our solution includes tailored news alerts from ISS advisors and customized notifications indicating upcoming deadlines for forms and applications.

## Design Research Goals, Stakeholders, and Participants

### Research Methods

A combination of interviews and observations were the most effective research method for the research questions we have. Since we didn't have a clear idea of the problems international students face, we wanted to maximize the amount of information we can get in our research time and semi-structured interviews will allow us the flexibility of follow-up questions to discern the root issue this population faces. Since the chance is slim that we will be interviewing on the day that a new visa or travel ban policy is instated, we supplemented our interviews with the directed storytelling method as well, to get rich data from the most recent experience of a student. For example, we asked students "Tell us a story the last time you felt unsure of your legal standing as an international student" and we asked advisors "Tell us a story about working with a student during a recent immigration policy change." This gave insight into how international students and ISS advisors are currently coping and using existing solutions while helping to create more empathy with the population through storytelling.

### Design Research Participants

Our first interview was conducted over the phone with a lawyer who specializes in immigration law. Mahir had previously met her, and she was extremely responsive into setting up a 30-minute phone call with us. She is an expert attorney regarding immigration law, and as she explained, she mainly works with companies on behalf of their employees in need of visas. Her experience was less directly with students/individuals and more with their employers, but she was able to explain to us more of the concerns and focus points of people looking to get a visa. This interview also helped us realize that we would like to narrow our questions a bit more; for each question we asked, we had to add more specific follow-ups to really understand.

The second interview was with an advisor from the UW's International Student Services (ISS). We met as a group in her office at the ISS, where she explained her interactions with students, their specific concerns, and her frustrations with the current system. This interview was extremely informative, as it showed us that most of the struggle lies in how to best communicate relevant information to international students. She also dispelled our thoughts that other schools did not necessarily have international student resources - apparently, it is actually a lot more common for schools to hide their services behind a login portal, so as to discourage access by outsiders, however to add that speaking with students over a wider range of colleges will help us gain more grounding on that notion.

Our third interview participants were Graduate Students, one an international student, the other is a citizen, but is initially from Iraq. The former student, has to yet contact ISS for news about new policies regarding visas and travel but primarily relies on googling new updates and news sources like newspapers, to learn more about any upcoming changes. On the other hand, the student from Iraq, who is a student now, doesn't have the need to use ISS and relies on news for information, but also isn't too worried since he hasn't had to travel.

## Design Research Results and Themes

### Summary of Key Findings

There were many surprises for us in our research stage. It was beneficial to speak directly with students, advisors and other stakeholders of the project, this allowed us to better understand the various concerns or roadblocks they face with the current state of immigration law. One of the most important findings was that advisors and educators often have difficulty finding an effective way to communicate to such a broad range of international students; there are so many cultural norms to adhere to, it is often difficult to provide specific, personal information to those in need. There have also been issues on how the students perceive lawyers and ISS advisors and what information they can provide. Overall, our research paved the way for us to determine how best to empathize with our users and design a product to fit their needs.

### Design Research Themes

Throughout our exploratory user research several themes and patterns emerged from each stakeholder -- some which aligned with the assumptions we had about users, but many that surprised us. As expected, we found that all stakeholders involved had various levels of difficulty dealing with ambiguity and reliability of information surrounding any international student or immigration policies. Even the immigration lawyer we had spoken with noted that recent vague and inconsistent executive orders were difficult to for immigration officers to provide clear opinions on. While interpreting information also posed a challenge for the ISS advisor we spoke with, the biggest challenge was “counteracting disinformation” by means of communication. Dispelling rumors from students, faculty, or the internet, means *“helping people understand what’s reliable, what’s crap, what’s well-intentioned but bad info. Helping people understand why there’s no clear answer, [which is] very hard especially at an institution of this size.”* Clearly, ambiguity of information is often inevitable, but providing as accurate of information as possible and/or being able to offer assurance when uncertainty is unavoidable are what the professionals, both the ISS advisor and immigration lawyer, are challenged with. The ISS advisor walked us through the usual mediums of communication she uses to reach her students, including email and a newsletter, but inadequate information infrastructure (including an outdated system using COBOL) leads to the inability to efficiently tailor the lengthy newsletter for the individual student, resulting in the student disregarding the important information. She lamented that the majority of the questions she receives from students were answered in a newsletter and she must redundantly point them to it. While one of the students interviewed will contact his ISS advisor for “seasonal” questions (visa logistics, internship visa, etc.), his main source of news comes from googling information. He does “skim” the newsletter that ISS sends out, but relies on information from the internet to sort out any fears of uncertainties he may have. Since it has taken multiple emails, phone calls, and office visits to setup an advisor appointment, he finds it more convenient and time-saving to find information himself.

In short, the most salient themes which emerged from our exploratory research were:

- In the current political climate, even the most skilled professionals that could provide a source of reliable information, have a difficult time deciphering the specific effects of new policies or orders.

- There is often a misunderstanding of what the ISS and legal works can provide for the student: they can not get the student a job, visa, etc., but can provide guidance.
- There are “four point five” ISS advisors for 8,000 international students currently on campus, making the personalization and immediacy of information difficult to relay to students. This results in busy students disregarding important newsletters.
- Immigration issues are not students’ top priority, and some have adopted a “fatalistic,” “if it’s going to happen, I’ll know soon enough” attitude. This means they don’t reach out to advisors, but rely on googling and rumors amongst friends for information in time of concern.
- Misinformation compounded with miscommunication makes the job of advisors very challenging, which impacts how international students can be accommodated.

## Task Analysis

### Who is going to use the design?

We want to design our product for currently enrolled International Students at the University of Washington. This may extend into however long they have access to UW resources, which is a few months after graduation. This will be designed like a portal, where students have access to the resources that are curated by advisers from organizations like ISS.

### What tasks do they now perform?

Currently students, receive big newsletters with reminders and information not geared towards them. The open rate alone for these newsletters are only 50%. This results in many students having to do their own research online and then later coming in to meet with an ISS adviser to fill out forms under a time crunch. Students also often bring up questions to the ISS that are clearly included in the newsletters.

### What tasks are desired?

We want to set up filtered reminders to students impacted by certain things. We want to be able to give incremental sets of information to help them be prepared for deadlines. The ISS adviser we talked to said a lot of their work is forced to help seniors because of impending deadlines. This means helping proactively helping freshman prepare for the first summer is tabled. We would also like to provide curated, personalized news to students, so that they are not overwhelmed by too much information; rather, they'll read things only that pertain to them.

### How are the tasks learned?

Most of these tasks of what to do is learned under pressure or as need arises. Advisers also note that peer anecdotal information is often spread around. This may even come from professors wanting to help. However, misconceptions and false information easily permeate these information networks. Types of students also vary, as some people are extremely organized and on top of deadlines, while others may not be as well-versed in their deadlines and needs.

### Where are the tasks performed?

Filling out forms often occurs electronically, and may include a complicated signature process. Getting the information is online as well, starting from a google search. Students also come to the ISS office on campus for help completing tasks.

### What is the relationship between the person and data?

The data/laws is broad and often impersonal for the purposes of covering every possible scenario. Furthermore, the information found online is often times deemed my students as something dynamic. They often coming into a meeting with an adviser with the thinking that the adviser can override static laws and protocols. In that sense, it is key to have our information have rapport and authenticity with the students.

### What other tools does the person have?

Currently the user/people in our target audience has the ability to go to their local Student Services department which would be able to provide more in depth information from an international advisors perspective. There is also the option to Google the information or possible policy change to learn more about it, as well as keeping up using Governmental news sources, such as the USCIS website and StudyInTheUsa which provides information regarding studying and visas.

These people can also contact ACLU, and the various Immigrant Rights Projects' to get more information pertaining to a policy change to see how it may affect them.

### How do people communicate with each other?

Much of the communication with advisers is via email. The same is true for lawyers and organizations/companies. There is also a transfer of information by word of mouth between students. Students may communicate with each other through various forms of social media as well.

### How often are the tasks performed?

The tasks depend on the time of the year, various policies and laws have different timelines, more specifically, news regarding immigration policies can happen sporadically, and when they do the tasks are performed at a higher rate. ISS officers reported certain times of the year pertain to different concerns from students, such as the concern of traveling right before summer break.

### What are the time constraints on the tasks?

This depends on the policy change which has occurred, and the impact to the student themselves, however on a case-per-case basis receiving this news and the potential repercussions of it can have a very high time-constraint. In the case of a deadline coming up, a student must know all the pertinent information as soon as possible.

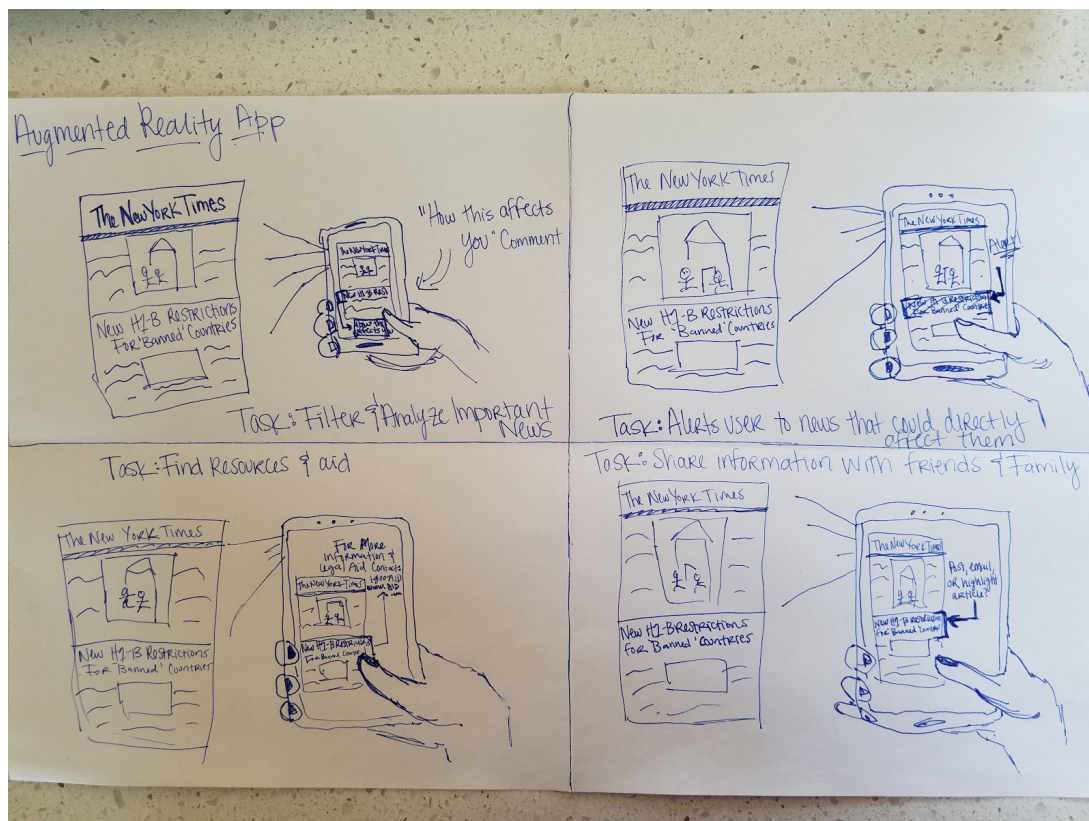
### What happens when things go wrong?

Laws are strict. When deadlines are missed, it often means a missed opportunity for the student in partaking in said internship or job. Deportation is not just a presumed threat; it is a possibility.

## Proposed Design Sketches - "3x4"

### Design 1: Integrated with Augmented Reality

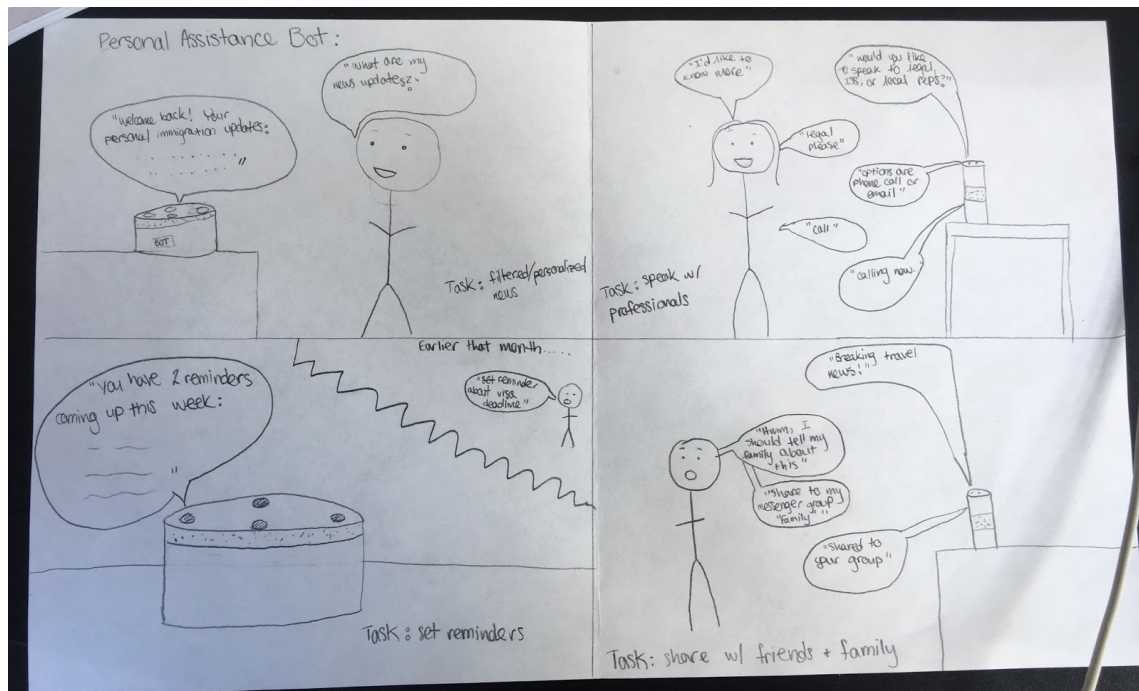
Using the camera on a phone we can take a print article and make it more interactive. It can scan for preset words and highlight them so a student can quickly find what is relevant to them. The scan will also link with a server like IBM Watson to help analyze tone and local slang. The augmented reality will also allow you to highlight the article and retrieve what other people highlight if that article has been viewed before by someone else. These will be easily shareable and comment on to help students communicate with each other. The AR would also provide other articles with similar keywords and other sorts of resource links, such as the mailing address of local politicians or lawyers to contact.



### Design 2: Personal Assistance Robot

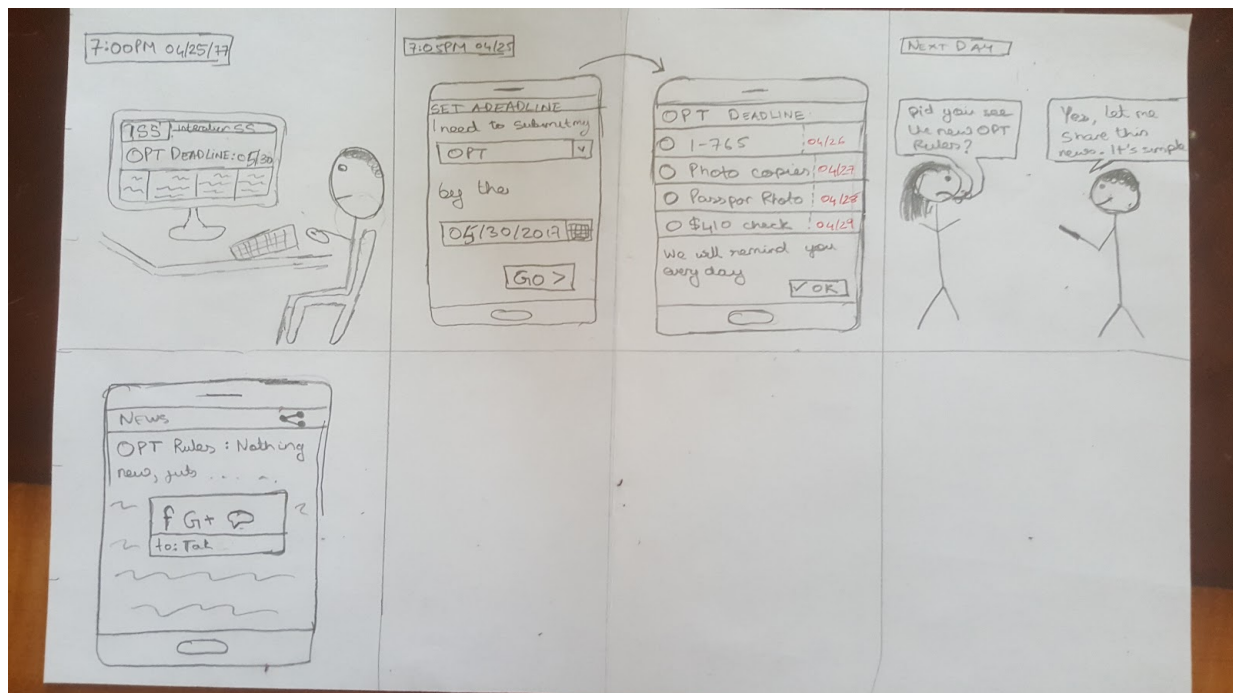
This will be a personal assistant robot that you leave on a table and talk to much like the Amazon Echo. The personal assistant will remember who you are and will filter recent news for what is relevant for you when you ask for pertinent recent information. It will comb online sources for phone numbers or email addresses. There will be the option to save contacts whenever you use a number or addresses. Of course the emails will be dictated by the user's voice and confirmed by the user before sending. These communications tools can also be used to contact friends and families to discuss findings. You will also be able set alarms for reminders for due dates on forms. These reminders will only go off if the motion detector sense your presence.





### Design 3: Traditional App on multiple platforms

This would be a website and a mobile app. This app will webcrawl articles and information provided government sources and repackage them. The articles will be shareable. There will be calendar to highlight and show major due dates for visa protocols. There will be a way to schedule reminders on it as well.





## Written Scenarios

### Scenario 1

Tara is a first-year student at the University of Washington and she has moved from Iran to study in the US. She knows that there will be some difficulties for her as an international student, but she does not know much about immigration laws and news. Her ISS officer sends her a weekly newsletter, but most of this information does not seemingly pertain to her, or the important information is mixed up with other news that she skips over. She is busy in her first year of college, and opens the newsletter about 30% of the time.

She knows she must find a way to get information she needs, in an understandable way. So she downloads this new smartphone app she's heard of, called Clarifilter. The first thing the app prompts her to do is create a profile, entering her country of origin, year, major, visa type, and other information. The app then uses this information to build her a personalized list of news that matters to her.

When a new story breaks about a policy change, an ISS advisor will write out a bulleted list of the information, summarizing the facts about the news (thus eliminating false rumors or misinformation). This bulleted list is then filtered to students like Tara, who receive a notification with information containing what they need to know. Tara can then read this notification; she can also subscribe to other tags. For instance, she would like to travel home to Iran for the summer, so she looks at the #travel tag, and learns more about the particular situation.

In this scenario, there is a better contact between the ISS and the students, where the information is more timely, curated, and pertinent to their specific needs. This eliminates the need for a student to go into the office and ask a question that they could have found elsewhere.

### Scenario 2

Hans is in his senior year in college, just starting his final quarter and is currently in search for a job. Graduation is approaching soon and he needs to file his OPT so that he can continue to stay and search for the job. He remembers that he had heard about the OPT but wasn't sure about what he has to do or when it was due.

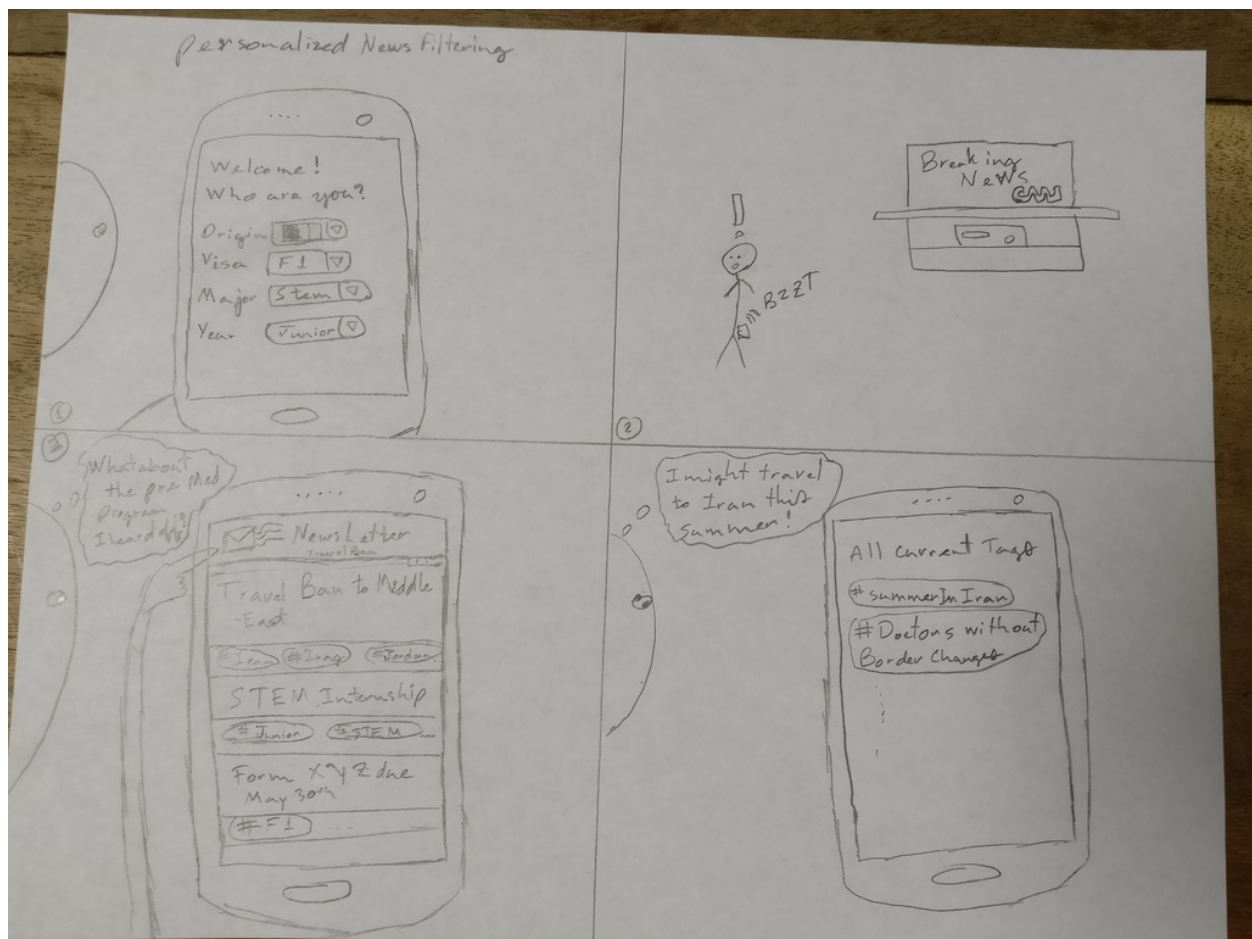
He checks his emails and can't find anything relevant to the OPT. He then remembers that a few months ago he downloaded an app called Clarifilter, which already had information about his country of origin, year, major and visa type so he opens up Clarifilter and adds a new reminder. He is given a list of options, one of which is OPT, he selects that and goes over to the next screen, the app auto populates a list of requirements of the process of applying for an OPT, along with dates of when to collect and mail the requirements and what happens after the approval. He sees that he should fill out his forms soon, so he clicks on the reminder, sees the details of the form and what he needs to fill it, and starts the process.

On the next day, he sees his phone buzz reminding him to photocopy his documents, he marks that off and he sees that he is ready to submit the documents.

Hans was successfully able mark off his tasks easily, allowing him to swiftly finish his paperwork, with succinct but apt information, and submit his documents in time.

## Storyboards of the Selected Design

### Task 1: Filtered/personalized news



## Task 2: Setting and accessing reminders for important deadlines/events

