Career Coach

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[https://www.monster.com/career-advice/article/4-signs-hire-career-coach-0129]
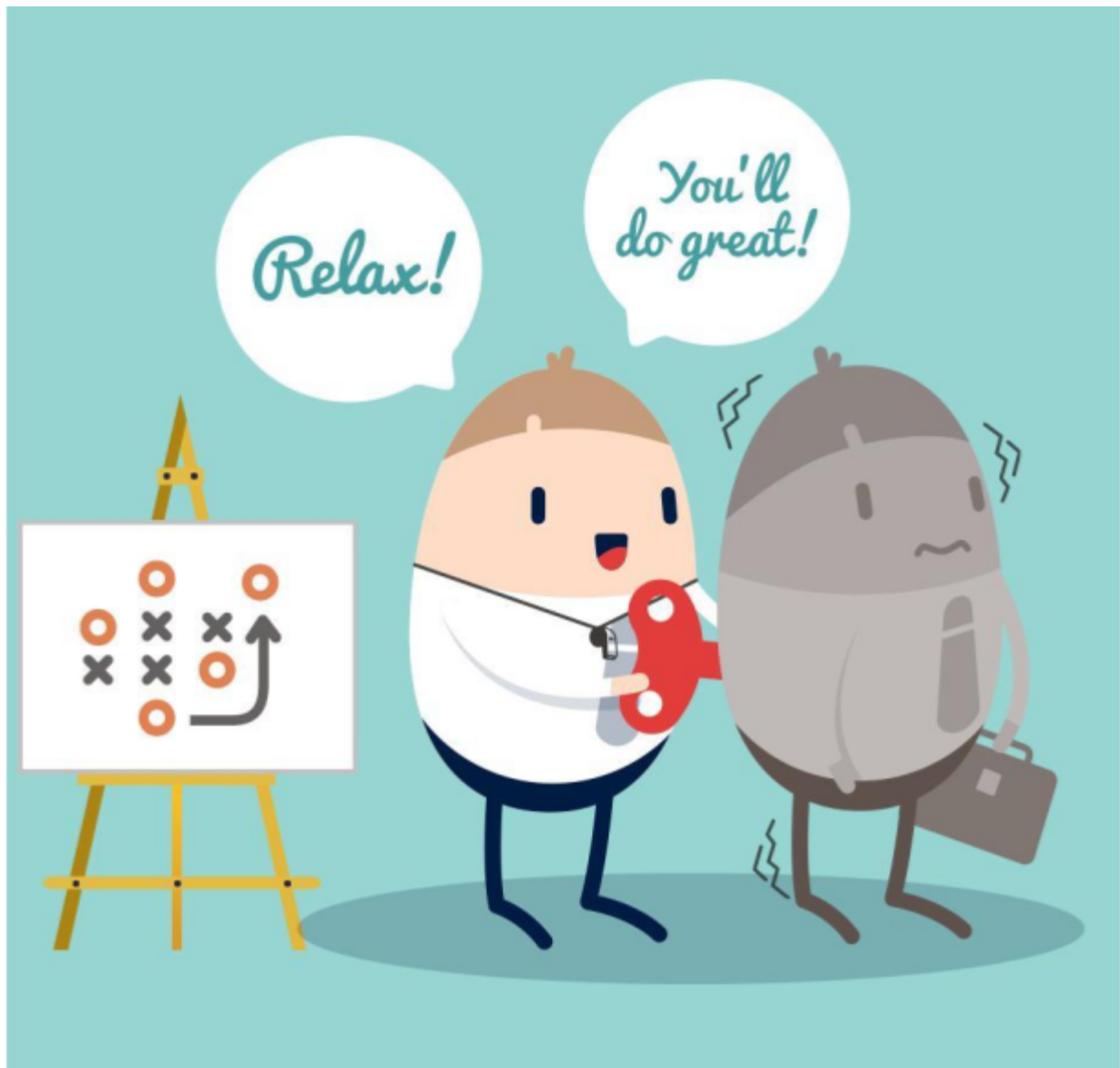
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Human Computer Interaction
Section AA

Team

Alexandro Akifarry: Conducting user research, brainstorming, sketching, prototyping

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Problem and Solution Overview

Attending career fairs and networking events is an important part of career development for undergraduates and young professionals. However, from our own experience and user research, we have learned that these events cause particular stress for introverts, or individuals who gain energy from being alone instead of with others. Our research indicates that introverted individuals consider networking events to be overstimulating and they think that they are not able to show their best selves in the short interaction at a career fair booth. Introverts believe that they have trouble with first impressions because they don't know what to talk to the recruiter about. Because these interactions can ultimately play a large role in whether or not an individual receives an interview and thus a job, it is important that these interactions go well. In order to help introverts make the most out of their career fair experience, we focused on two main problems: emotion regulation during overstimulating career fairs and creating the best first impression. We address these issues in our smartphone application 'Career Coach', which enables users to present themselves in a positive light by informing the applicant about the company, providing highlights from their resume to help create a tailored pitch to the recruiting company, and by responding to emotional scenarios that could inhibit the applicant's ability to successfully talk to a recruiter.

Initial Paper Prototype

The picture to the right is the first design that we iterated on, which is a combo of an earbud and a ring. Our tasks that we focused on were emotion regulation and making a good first impression. We will focus briefly on the tasks on this design, but we will be focused on our second iteration which was a mobile application.

Task 1: emotion regulation. Helping an individual deal with impostor syndrome

The task begins with the ring flashing red. This red flashing happens due to machine learning based on voice modulations due to emotion. The person twists the ring to cause the earbud to start talking. Earbud says "I noticed a high degree of stress during your last interaction. What's wrong?" The person is then able to say "impostor syndrome" or "I feel like I don't belong here". The earbud says "It is completely normal to feel that way. You seem to be experiencing impostor syndrome, which is well documented situation. Think about something you succeeded at lately to give yourself credit for your accomplishments." *At the end of this interaction, then hopefully the person feels less impostor syndrome.*

Task 2: Creating a pitch for a software engineering position at Airbnb

*Person is in the line to talk to Airbnb. The person has already uploaded their resume and relevant information. * The task is to figure out what to focus on. The person says "what should I talk about with Airbnb." This causes the ring to light up green. Then the person twists the ring and the earbud says "Based on your interest in an IOS development position, highlight your iphone application you made last year called Balance." *Hopefully at the end of this interaction, the person feels more prepared to talking to Airbnb*

Our change to a mobile application was based on feedback from many classmates during heuristic evaluations, TA advice, and insight from James. This design change addresses several concerns brought up on the social acceptability of talking to an earphone in public, concerns about disruption in conversations with recruiters, the lack of accessibility for individuals who may have hearing loss, and how it might not be an ideal interaction model for a student at a career fair. We will talk about this more in later sessions. Below is the picture of the initial paper prototype of the mobile application. For the following tasks, we will focus on the prototype of our mobile application.
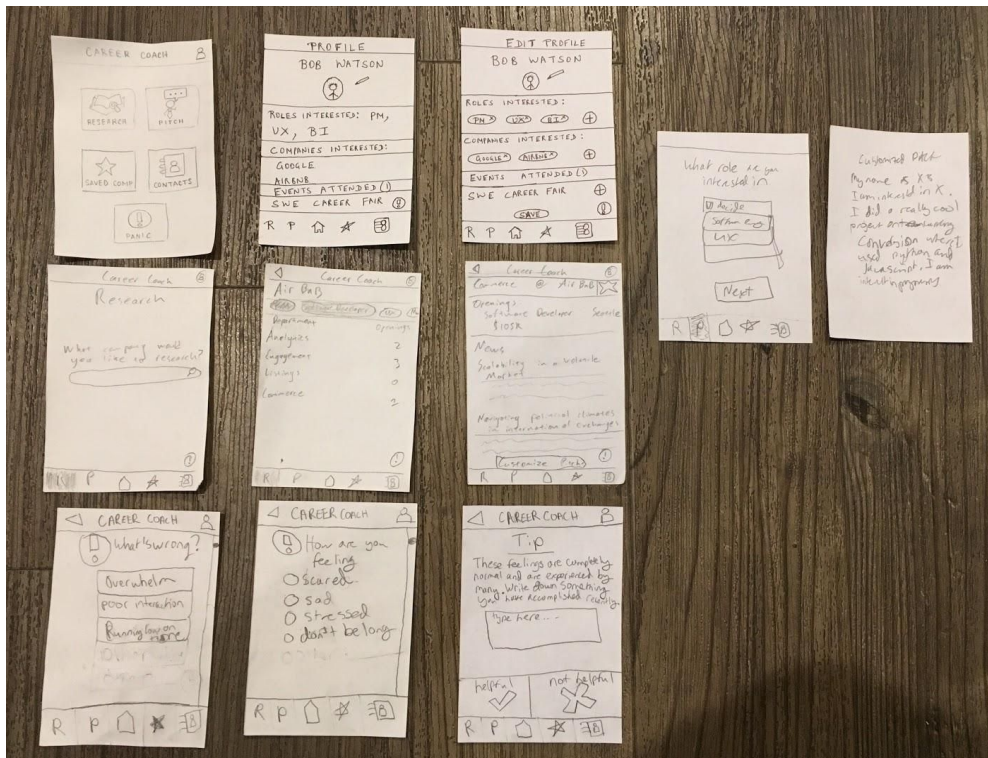

Task 1 (emotion regulation): To quell feelings of imposter syndrome while at a career fair.
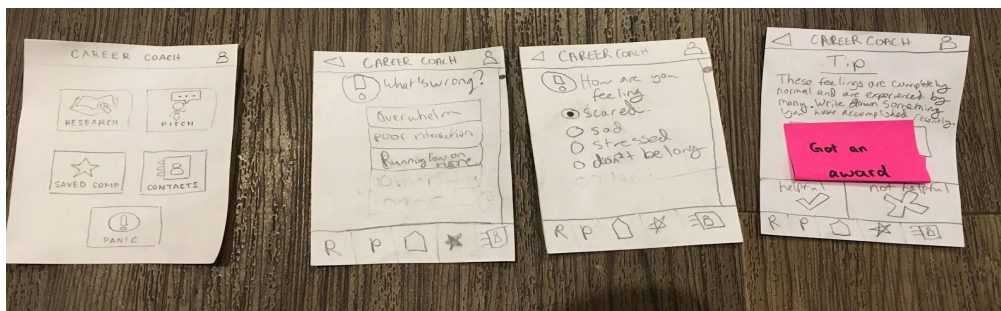
From the home screen of the app or any other page, the client can click on a panic button which is indicated by an explanation. This will take them through a process funnel which is comprised of a branching survey to get a sense what exactly the client is going through so we can provide tailored suggestions to address their distress. The funnel consists of a questions asking about general situations and then about specific feelings. This solution to

their problem would be in the form of advice, comfort, affirmation, or exercises the user could complete. The survey leads you to a probability distribution of solutions which is weighted towards solutions most relevant to your situation and is informed by the client's feedback as to whether a given solution was helpful or not. If a client indicates a tip is helpful, they will be returned to home or wherever they came from previously. If they click not helpful, a new tip will appear.

Task 2 (making a good first impression): Helping a client look up company information that is relevant in a career fair along with a pitch. We did this specifically focusing on a software development position at Airbnb.
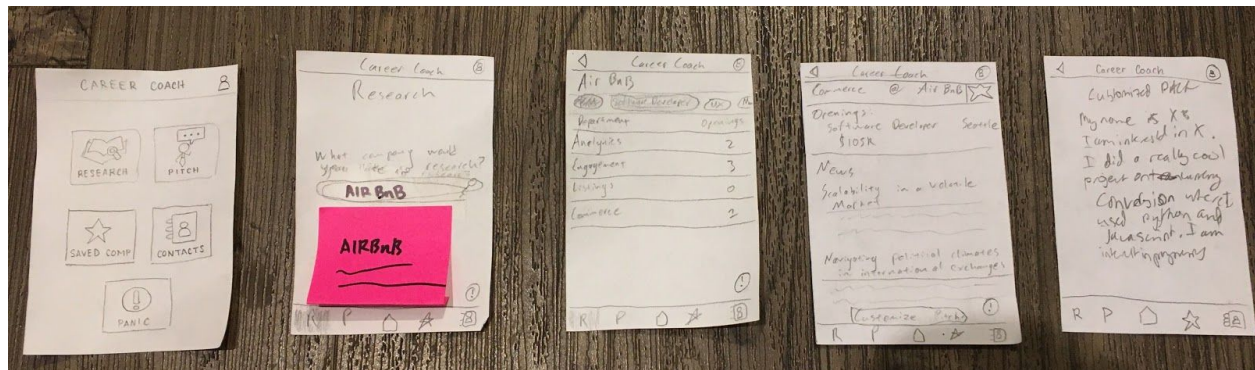
The client can taps on the research button on the home page or the research icon on the nav bar at the bottom of the page. This takes them to the company discovery page. From here a client enters a company of interest, which in this case is Airbnb. This search will get them to Airbnb's company details page which breaks down the company by its departments and allows the client to select what roles they are interested in. The roles are informed by the list of roles that interest the client in their profile. The selection starts with roles you previously selected for your last search highlighted with your entire list available for toggling. In this case, we are assuming that only the software development position is selected. They can then click on a department to get a page that contains more details about that specific department, openings in that department, and news about the company and that department in particular. This page has an gateway button to a pitch generated for this precise role and department combination.

Testing Process

Our first round of usability testing and heuristic evaluation was done with our paper prototypes, which included an ear bud and a ring. We received many valuable questions that played a role in our redesign. These questions included how the earbud knows when to give advice and how the client will know that he has to twist the ring in order to indicate the earbud. We also received questions about how we would deal with noise in a career fair, different accents and privacy concerns of clients. This gave us information that our design was not intuitive and was not a good fit for addressing our tasks and population.

Based on our heuristic evaluation feedback along with feedback from James and TAs, we changed our prototype to a mobile application.

A mobile application made more sense for this use case for a variety of reasons. Our original design required the client to interact with the application while talking to the recruiter, which would detract from the ability of an introvert to zone into the interaction and would interfere with focus. Using a more discrete design that works better in lines before and after interactions and is discrete which will not draw attention to the client. We kept the first task about regulating emotions, but decided to focus on making a good first impression on the recruiter as our second task as we thought it the more interesting design space for this design. Both of these tasks allow us to address the weaknesses of introverts. We then performed usability testing and heuristic evaluation using our new paper prototype.

We performed our usability tests on our new prototype with two participants.

Our first participant was a female undergrad student, who is a senior in the CSE department. She identifies herself in between an introvert and an extrovert. We interviewed her at the new CSE building. Braydon facilitated the tasks, Alejandro acted as a computer and Ridhi took notes. We asked the participants to perform a set of tasks. We asked the participant to imagine that she was at a career fair and she felt a sense of panicking due to being nervous and overwhelmed. Her first intuition was to tap on the panic button. She then performed the following actions:

1) Selecting her feeling from a list of feelings.
2) Specifying her feelings.
3) Providing feedback to the advice she got.

After this, we asked her to research about Airbnb to create a pitch.
1) Researching about Airbnb
2) Searching for open positions at Airbnb in software engineering
3) Tapping on the pitch button to prepare her pitch for the company.

We discovered that several elements of the design confused her. First, the word 'Research' on the home screen gave her an impression that it was research work conducted by students and not researching companies. In the 'Company' tab, she was unsure how the list of companies was generated. She did not know if they are favorite companies or companies at a particular event. She also expressed concern about what would happen in the application if the advice was not helpful and because we did not have a second tip available we couldn't show that flow. Likewise, due partially to how we framed the task, she chose a different overarching emotion than we expected.

Our second participant was also a female undergrad student, who is a junior in the CSE department. She identifies herself as an introvert. We interviewed her in the new CSE building. Braydon was the facilitator, Alejandro acted as a computer and Ridhi took the notes. We asked the participant to perform the same set of tasks. The only new addition to our testing process was adding some time to explain onboarding and showing her the profile screen. In the emotion regulation task, her first instinct was to tap on the panic

button. However, she was concerned by the inability to enter an emotion that was not in the list we provided. She liked our earlier idea of having 'Other' option in the list of feelings and then type the feeling. She also did not find the scenario screen helpful and thought it added more overhead to the client experience. Within our second task, she felt that the 'Departments' tag leading to jobs was a confusing way to set up our interface. She felt maybe we should just list all the jobs along with their department name, rather than have a separate tag for 'Department'.

Testing Results

Heuristic Evaluations

We iterated through many paper prototypes in our usability testing and heuristic evaluations. As a result, our digital mockups differ a bit from our initial prototypes. Below is a description of what we found in our heuristic evaluations.

1) **Match between system and real world:** In our original earbud design, participants expressed concern as to how the earbud would know whether the user is talking to it or another human. This was part of the feedback that led us to move to a mobile application. For our mobile application prototype, the word 'Research' in our company research flow created confusion for participants. That was because participants interpreted research as research positions and not researching company positions. The departments tab was also confusing to the participants. They didn't understand what commerce meant in our flow. Our prototype was modified to remove these ambiguities. We changed 'Research' to 'Research Companies' and included 'Commerce' under Departments column so that users know that 'commerce' implies department.

2) **Error Prevention:** Many of our participants asked us about what to do if the feelings/emotions they are experiencing is not in the list of emotions. Considering this evaluation by our participants, we decided to include 'Other' category in our list of emotions. If the user selects 'Other', he/she has the option to type her feelings. The app will then display advice/tip based on the emotions typed by the user.

3) **Flexibility and Efficiency of use:** In our earbud design, participants in heuristic evaluation pointed out there was no cues to know that the client needs to twist the ring to initiate conversation with the earbud. Hence, we changed to the mobile app design.

4) **Aesthetic and minimalist design:** Our heuristic evaluation expressed concerns about using bright colors for a design flow that is meant to help individuals calm down. Based on the heuristic evaluation by our participants, we have chosen soft and calming colors. We have refrained from using colors that are associated with overwhelm or strong emotions. Participants also pointed out that certain buttons such as the 'Pitch' button were not very noticeable. We re-designed these buttons to make them more noticeable based on both placement and coloring.

Usability Testing 1:

After our usability testing 1, we found out that our device wasn't very interactive. The participants in our usability testing had lot of questions such as how does the earbud know that it has to respond, how will the user know that he has to twist the ring to interact with the device, what if a user wears multiple rings, how does the earbud know what to say and how will the earbud know if the user is talking to the earbud or another human. In order to make tasks more simple and interactive for the users, we changed our design to a smartphone application. We modified the following after our usability testing 1:

1. Change of device: The major change in our design was to go from an earbud and a ring to a smartphone application.

2. Context and Environment: We also realised that context and the background setting play a very crucial role for a product to meet user needs and do well. Career fairs are expected to attract large numbers of people and thus are noisy places. This creates concerns around filtering background noise, understanding speech, and the judgement of others.The change of design to smartphone app solves two problems: the user doesn't have to worry about the background noise and being uncomfortable talking to the earbud in public. Hence, our new design takes care of the context and environment to make the user more comfortable.

Usability Testing 2:

From usability testing 2, we realised that words play an important role and that certain words can be misleading. For example, our participant saw the word 'Research' on the home screen and thought that it implied some research work instead of researching companies. Hence, we learnt to use more specific wording in order to avoid ambiguity. In our new design, we changed 'Research' to 'Research Companies' for example.

Usability Testing 3:

1) Based on usability testing 3, we learnt not to include features/ tabs that are misleading. In our company research screen, we had listed the jobs based on the job title and department name. The department name was confusing to the users because they didn't know that it referred to a department. To remove this confusion, we re-designed the job list by adding the department name under the department column. For example, 'commerce' is now listed under the 'Department' column. Hence, users now know that commerce is a department name.
2) User control: We also learnt that in order to make an application more useful to the client, we need to give clients more control. In our usability testing, the participant raised concern what if the emotions that someone is experiencing is not in the list. To give clients more control over selecting their emotions, we have added 'Other' option, which allows clients to write a longer description of their emotion.

Design Critiques

In the overall process, the most important feedback we got was related to interaction. There were lots of questions when it came to how the earbud will interact with the user. In our smartphone application, the most important critique we got was to include a broad range of feelings for the user and to give the client the control to describe their feelings so that the app can provide the most relevant and helpful advice. Including a broad range of emotions allows us to customize more towards the customers' experience. We took this advice and have included it in our new design.

Final Paper Prototype

The overall structure of Career coach remains unchanged from the initial mobile application paper prototype. The major changes were making the meaning of the various app sections more obvious, adding the ability to choose from saved companies on the search screen, and changing the format of the company details page.

Task 1 (emotion regulation): To quell feelings of imposter syndrome while at a career fair.
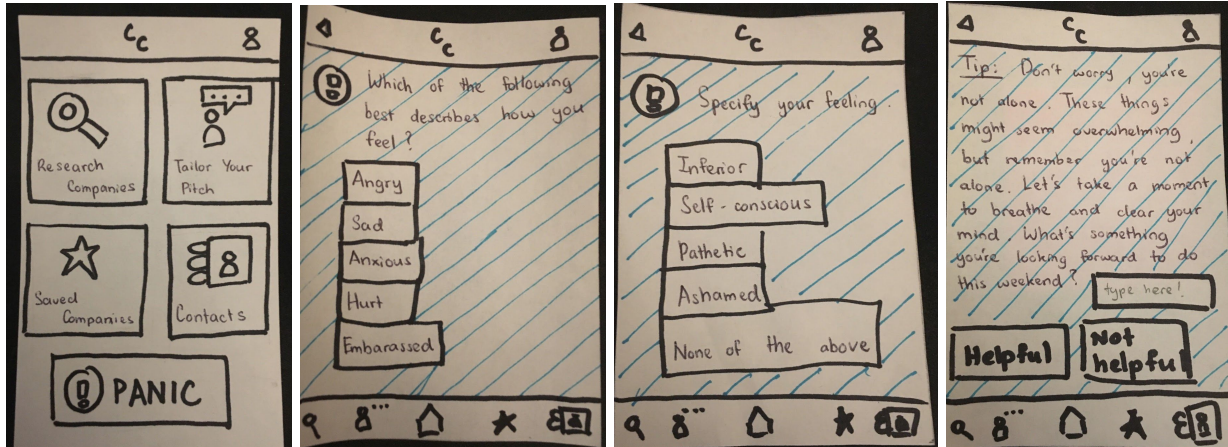
From the home screen of the app or any other page via the floating panic button, the client is able to click on the panic button, which will take them through a process funnel. They are then asked to select the overarching emotion that most closely describes how they feel. Then they can specify the more specific emotion to get to a solution for that specific emotion or select "None of the above" if they don't feel like any of the specific emotions match how they feel. Then they are given more general solutions for the overarching emotion. To complete this task, the client would select embarrassed and then inferior. The solution provided is still based on a probability distribution informed by the client's feedback.

Task 2 (making a good first impression): Helping a client look up company information that is relevant in a career fair along with a pitch. We did this specifically focusing on a software development position at Airbnb.
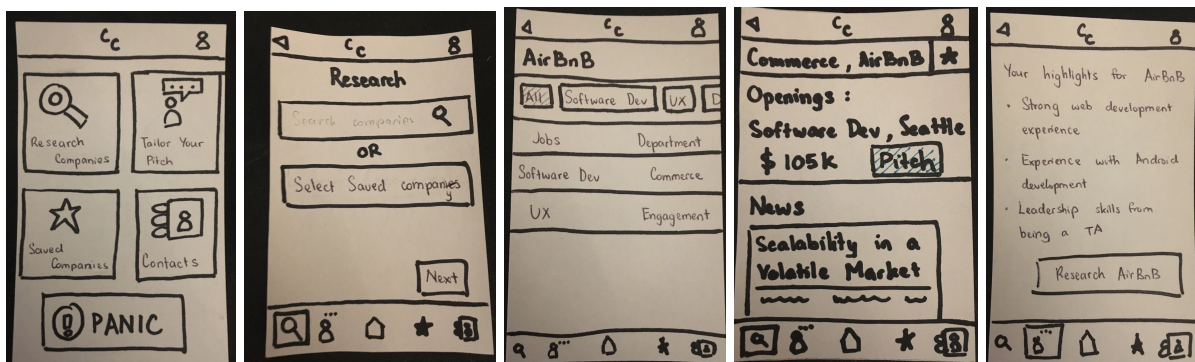
The client clicks on the research companies button from the home screen or the the research companies tab on the navigation bar from another page to start the research process. The client then has the choice to choose from a dropdown of saved companies or searching a company. Since the example client has Airbnb as one of their saved companies, they can either select it from the drop down or they can search for it once again. The company details page was changed to focus on job listings that match the client's selected roles and sorted by the department they're in. Listings with the same title and department

are combined under a single listing. An 'All' button was added to the roles to allow for the easy selection or deselection of the entire list. Selecting 'All' will highlight all the roles unless all of them are already selected, in which case 'All' will deselect all roles. Clicking on a listing will take you to a position details page which focuses on the information that you should know when applying for that position, such as salary and general news about the department. Selecting the pitch button from here takes you to a pitch screen customized specifically to that opening.

Digital Mockup
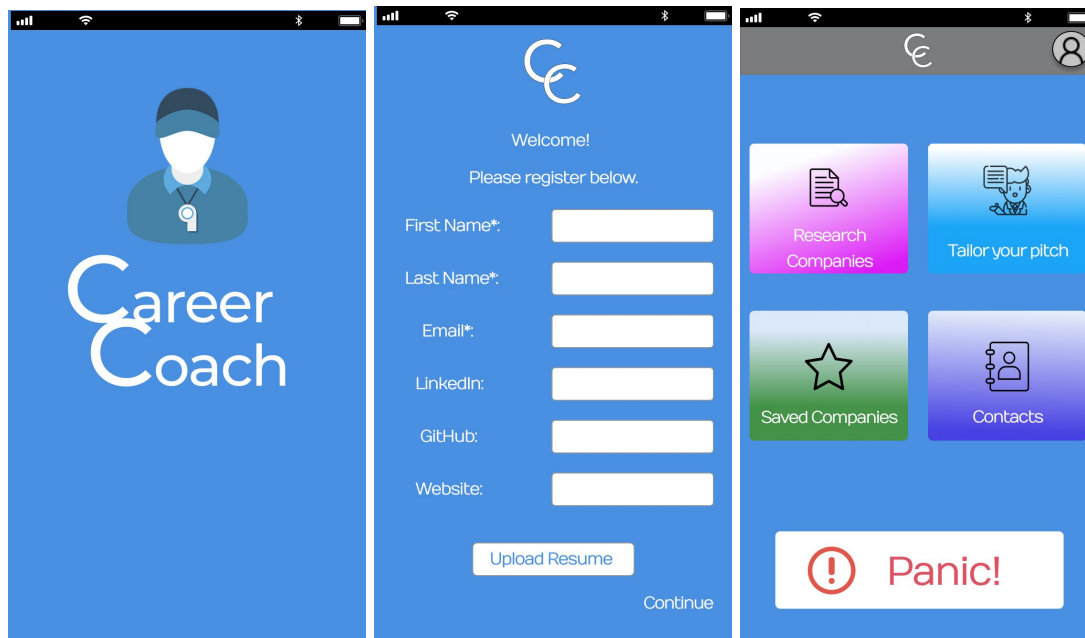
These first two pages are meant for onboarding and the third is the main menu. The first page is the loading page/ Splash screen. The second screen is a special sign-up/registration screen that the customer can use to set up an account initially. Once they have done this they will have access to the main Career Coach page. This main page consists of buttons that become part of the bottom navigation bar in other screens. The navigation options on this page are research companies, tailor your pitch, access saved companies, and access contacts along with a panic button. The customer can click on any of these to access different flows.
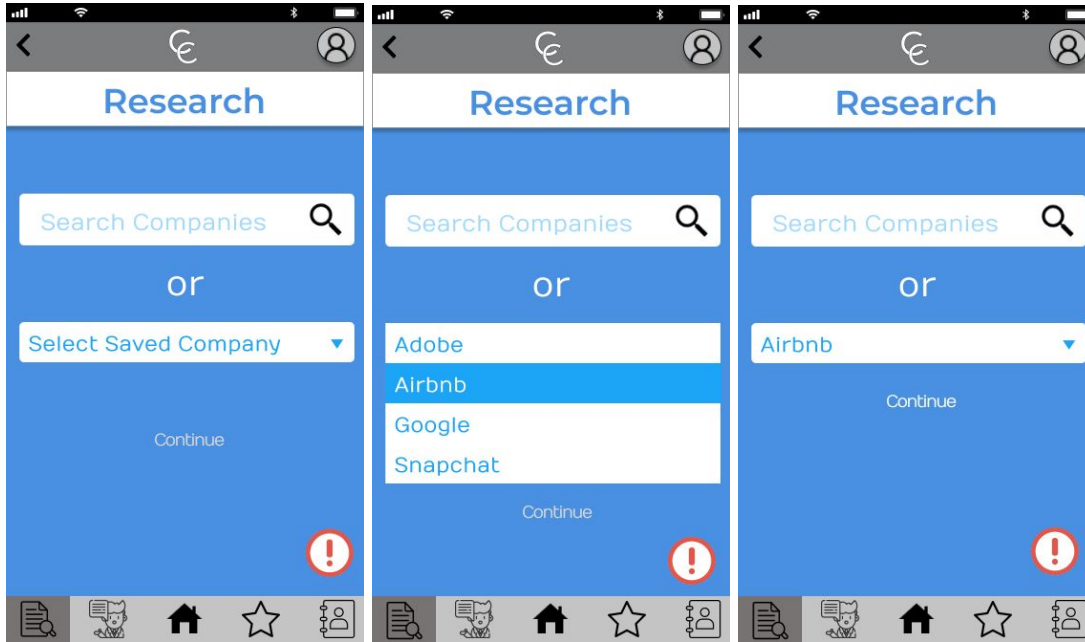
The 3 screens above represent the beginning of a research companies flow. This is how a customer can select a company from their saved list or search a new company. They can then continue to get more information. They get to this screen by clicking on the research companies button on either the home screen or in the navigation bar.
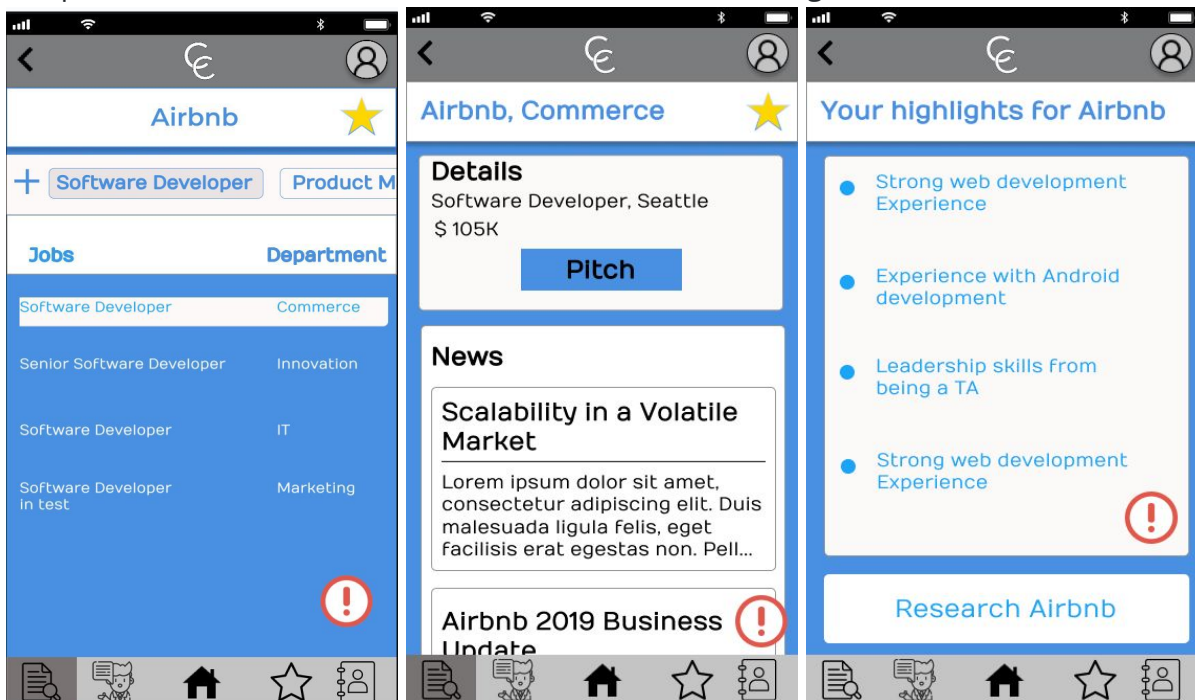
These three pages represent getting more detailed information on the company and highlights from a pitch. The first page allows a client to explore different roles. They can select different roles like software developer or product manager and the list of jobs will change. Once the client clicks on a listing, they are brought to a more detailed page with news and job information. If they click pitch, they are brought to the final page where they
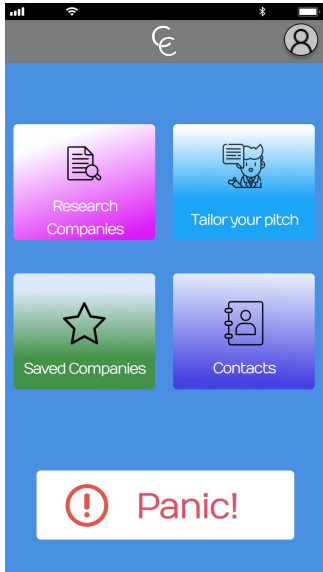
are given highlights from their resume to help design a pitch. They can click research to go back to the previous page.
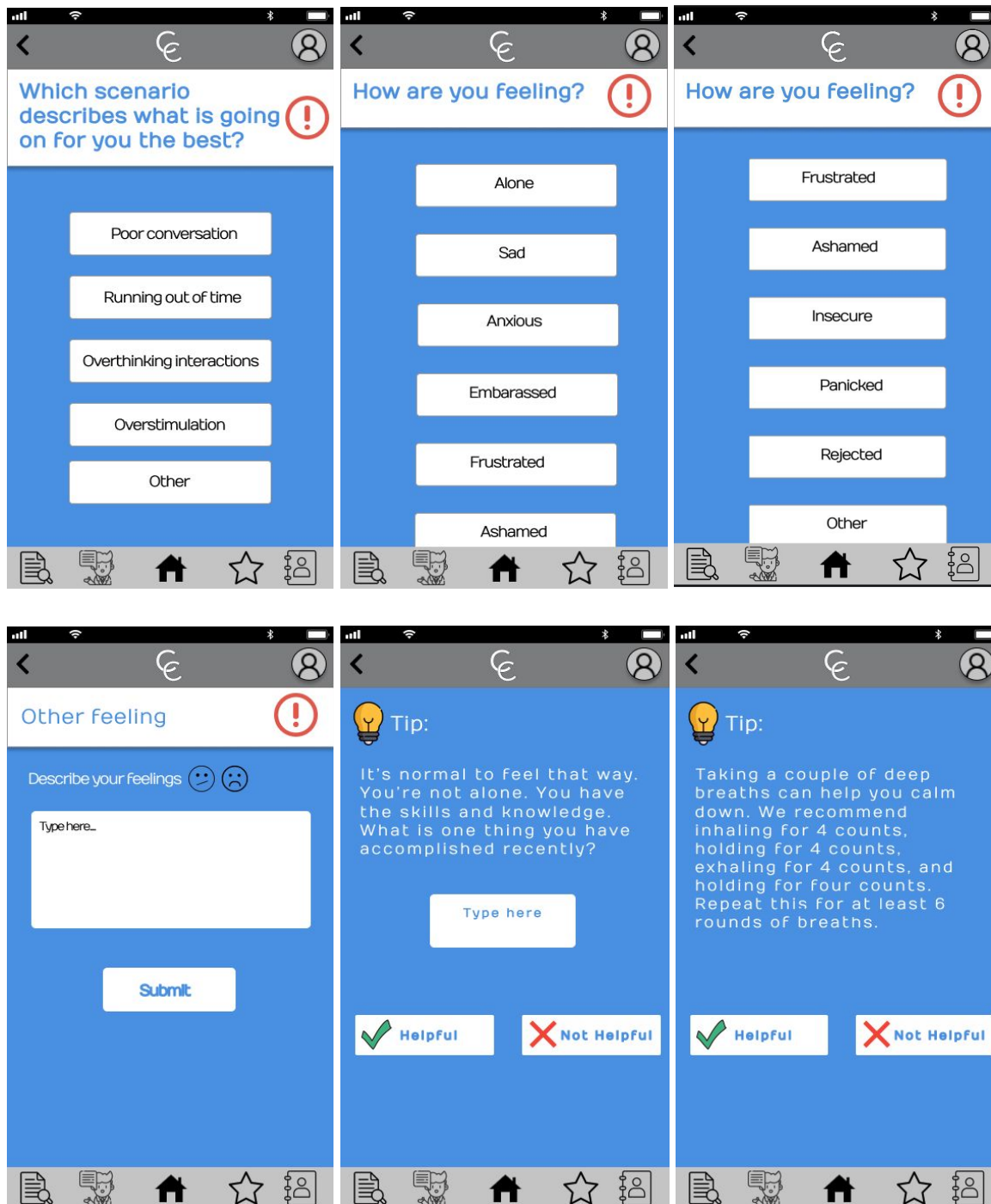
These 6 screens above illustrate going through an emotional regulation task. The customer clicks the panic button on either the home page or in the corner of the screen seen in other flows. They are then brought to a screen in which they choose what situation matches what they are going through best. From there they are directed to express what they are feeling with a scrolling page that allows them to choose many different emotions including an

other option. We specifically added the slight overlap with the menu bar to show that scrolling is possible. If they click other, they can express their emotion using text. Once they have gone through this process funnel, they are given a tip. If this tip is not helpful, they can click not helpful and that will bring them to another tip, which is illustrated. If the tip is helpful, the client will be brought back to home or the previous flow they came from. Once the user provides feedback on the tips, this feedback informs the probability distribution for the advice they receive in the future by making similar tips more or less likely corresponding to their feedback.

Task 1 (emotion regulation):

Screen	Step Description
	On the home page, the customer clicks on the panic button to enter the panic flow.
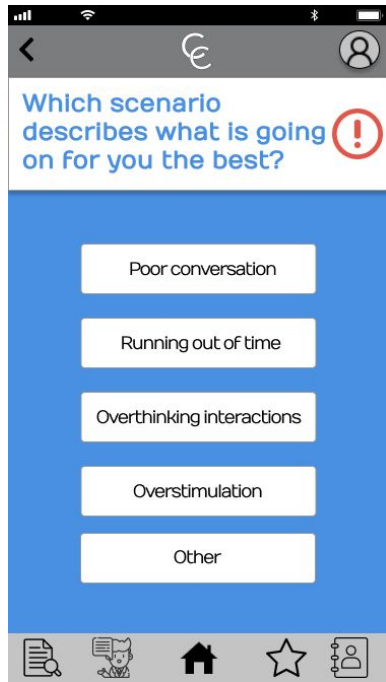
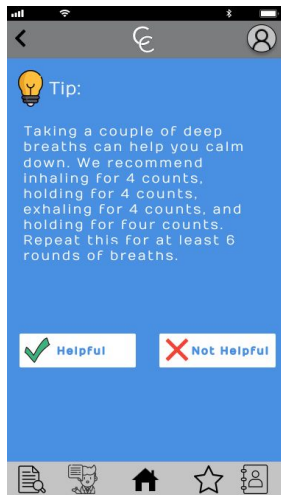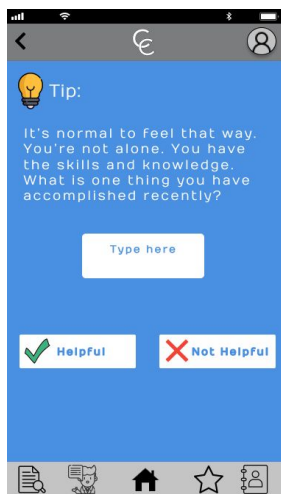|	
Which scenario describes what is going on for you the best? ⚠️ Poor conversation Running out of time Overthinking interactions Overstimulation Other	This leads into a process funnel where the customer can click a scenario about what is going on. In our task about impostor syndrome they can click overthinking interactions for example.
How are you feeling? ⚠️ Alone Sad Anxious Embarassed Frustrated Ashamed **How are you feeling?** ⚠️ Frustrated Ashamed Insecure Panicked Rejected Other	The customer can then scroll through different emotions to express how they are feeling. In this case, let's say the customer chooses insecure because we are talking about impostor syndrome.
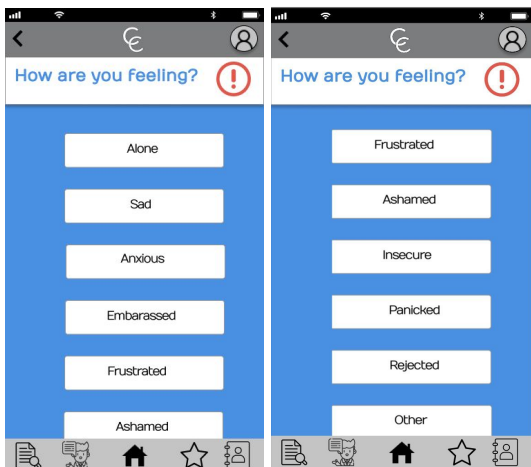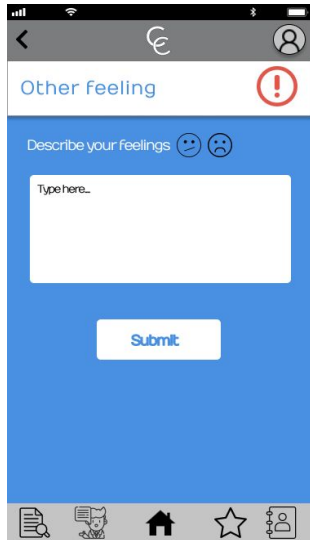
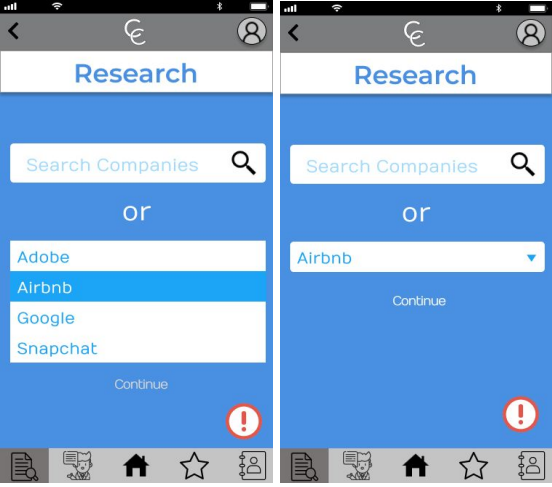|	
Other feeling ⊙ Describe your feelings 😐 😞 Type here... Submit	If the user selects 'Other', the user can describe her feelings by typing on the box. Once submitted, the user is taken to the next screen, which is advice/tip screen.
💡 **Tip:** Taking a couple of deep breaths can help you calm down. We recommend inhaling for 4 counts, holding for 4 counts, exhaling for 4 counts, and holding for four counts. Repeat this for at least 6 rounds of breaths. ✔ Helpful ✘ Not Helpful 💡 **Tip:** It's normal to feel that way. You're not alone. You have the skills and knowledge. What is one thing you have accomplished recently? Type here ✔ Helpful ✘ Not Helpful	Once the customer has described their emotions, they have access to a tip here. If they click not helpful, they are brought to a new tip which is shown below. If the tip is helpful, the customer can click helpful, which will redirect the client to the flow they were in before they clicked panic. This feedback will also make tips more likely to appear for similar issues.

Task 2 (determining what to talk to a company about):

Screen	Step Description
	The customer can click on research companies to enter this flow. Once the user taps on 'Research Companies', she is taken to the research company selection screen.
	The user can search for a company she is interested in or select any of her saved companies by selecting from the dropdown. The company selected from the list gets highlighted.This will help her to research for a company beforehand. The client is then taken to the next screen, which has job information related to the selected/searched company.
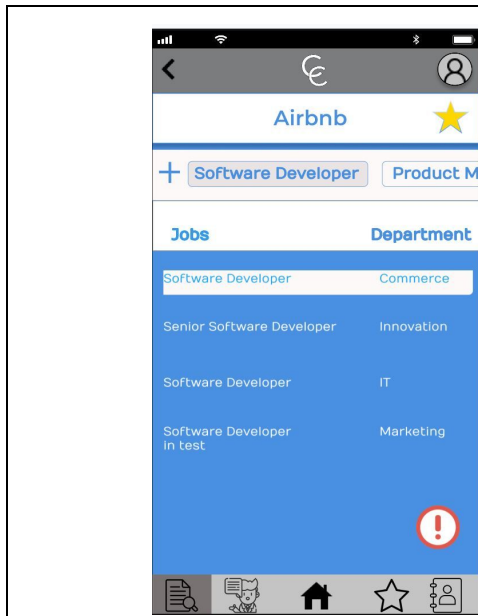
	The customer can then select the roles they're interested in for this company from their list of interested roles on their profile page. They can also add more roles with the plus button. They can then click on a specific role to get more information. In this case, they click on the software developer in commerce to learn more information.
	Once the client selects a job opening, details of the job are displayed, along with a button for the Elevator Pitch. The client can read news and other information about the department relevant to this position. Once the client taps on 'Pitch', the user is taken to the next screen which tells the user what to talk in front of the recruiter in form of 'Highlights' and impress the recruiter.They can click research airbnb to go back to the main research page.
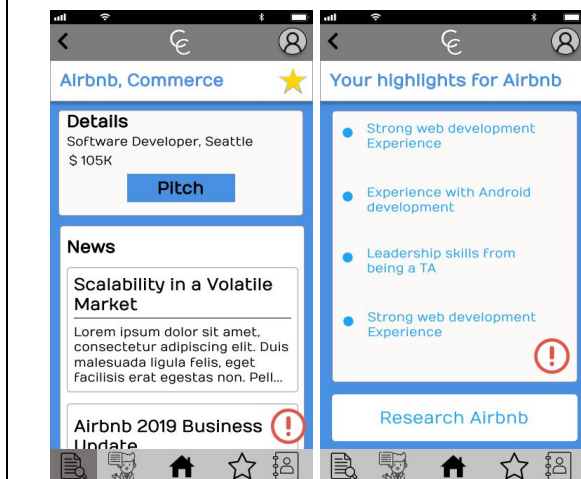
Discussion

We have learned a lot from this design process. One of the biggest takeaways we took from this process is to be willing to reevaluate designs and to actually listen to feedback from testing and others. Because there was encouragement earlier in the class to work on designing something that doesn't need to be an application, we focused on the earbud design. However, from speaking to James and individuals during heuristic evaluation, it was very clear that this design was not a good fit for the tasks, participants, and environment. Our evaluators had several valid concerns around how discrete the application, how it might interrupt interactions, accessibility, and how intuitive the interface was. It could have been very easy to become so attached to our initial design that we ignored feedback that suggested a

strong redirection. However, by listening, evaluating, and taking concerns seriously we were able to pivot to a design that could address the tasks of interest better.

The process moved us to an application interface and affected the design of both of our process funnels on emotion regulation and making a pitch. The feedback we received changed the set up of buttons and how jobs were presented in the research flow for example. The general focus of the tasks have not changed through our different prototypes. However, switching from the earbud design to the application design changed the level of detail of the interaction and caused us to think more carefully through screens. This required more than our original audio commands.

I think we could have used more iterations on our design. Because we gained valuable information from each set of tests that changed our design, we think getting more feedback would be more helpful in making more changes. Likewise, because we spent some time on the original design, we lost chances to get heuristic evaluation information from groups on our application. This information would have been invaluable in the design process.

Appendix

Usability test 1:

Test script:

We would like to thank you to take the time to participate in usability testing. The purpose of our project is to help introverts network better at career fairs by managing their emotions and asking recruiters the right questions to communicate better with the recruiter and make a good first impression. Through this usability testing, we want to gain a better understanding of how the users will interact with this application and perform their tasks. Remember, it's the prototyping that is being tested and not you. Any problems or issues that you come across is a defect with our design and not your fault. At the end of the test, we will have more time to talk about any questions or concerns that you may have considering our design.

Questions/Instructions:

1. What's the one thing that you would do the first on home screen? User presses the panic button.
2. How are you feeling at the moment? Selects what went wrong and how she is feeling at the moment.
3. Was the advice/ tip helpful? Gives feedback as helpful or not helpful for the advice/ tip she gets.
4. Which company do you want to research? Goes to saved companies. Selects Airbnb, selects software developer position and taps on Pitch.

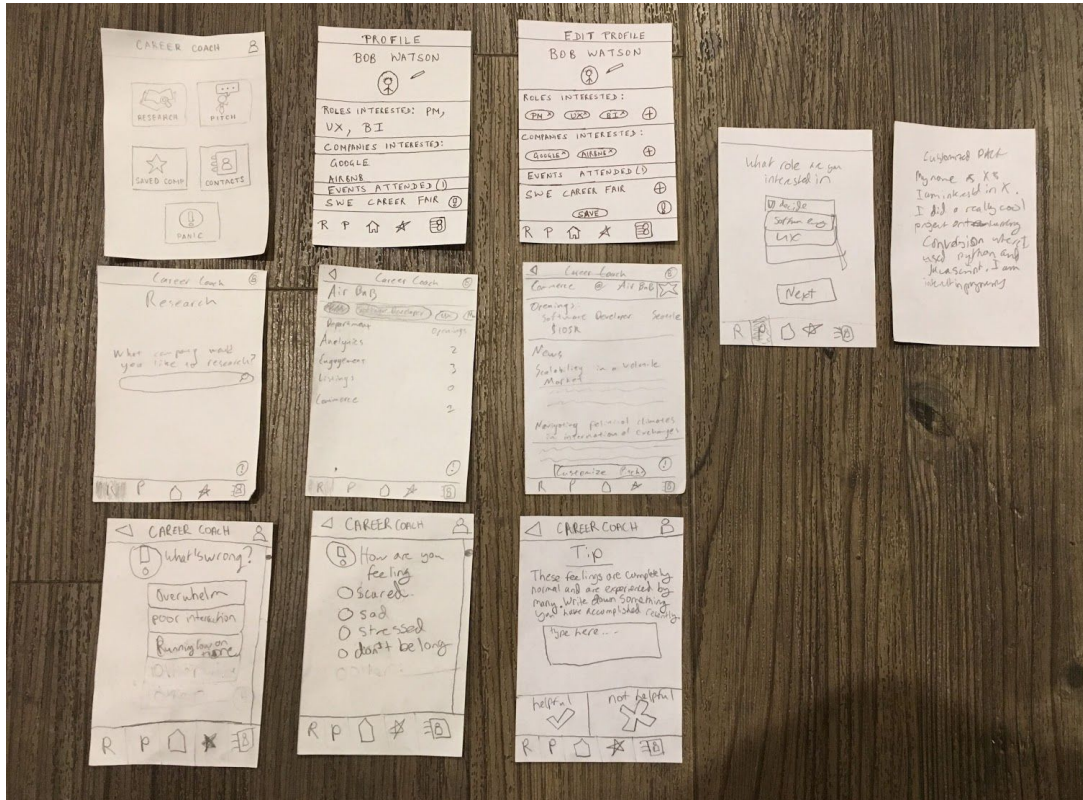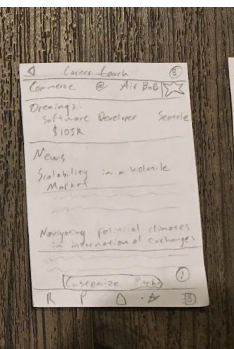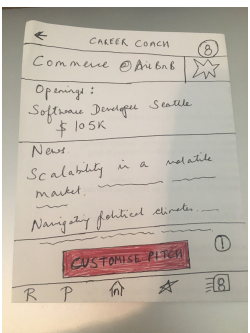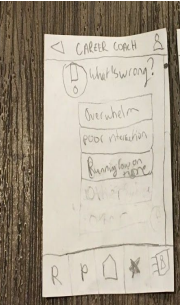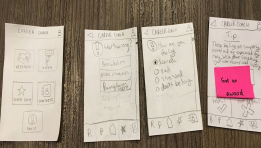Here are the materials involved in this test and issues identified.
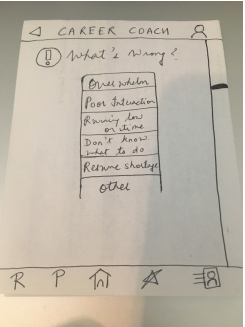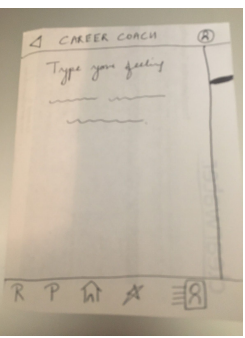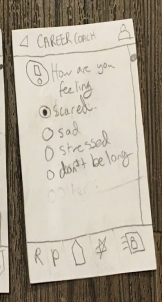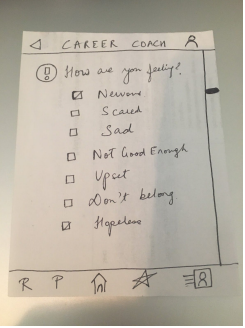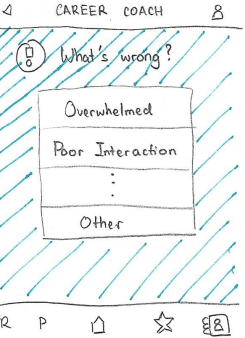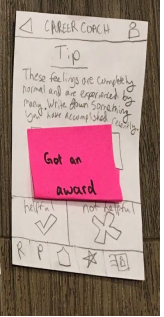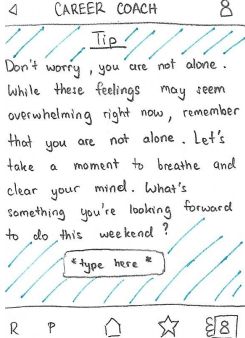
Image	Heuristic Category	Issue	Severity	Revision	Revision image
	Aesthetic and minimalist design.	'Customize pitch' button not noticeable.	2	Try adding color to the customize pitch button to make it more noticable. We are going with red for now but that color choice may end up changing.	

	Error Prevention	On 'What's wrong', what if problem is not one of our choices?	4	We added 'Other' in the list. If the user selects 'Other', User has the option to type his/her feelings.	
	Flexibility and efficiency of use.	Have options for multiple choices for feelings in 'How are you feeling?'	2	Used checkboxes instead of radio buttons	
	Aesthetic and minimalist design.	Put calming colors in 'Panic mode.'	1	We added a blue background to some screens to add a calming element. (only one of the screen is shown for revision image)	

		Flexibility and efficiency of use.	Better wording. Make it sound friendlier, more welcoming.	2	We tried to make it actually sound friendlier.	

Usability test 2:

Test script:

We would like to thank you to take the time to participate in usability testing. The purpose of our project is to help introverts network better at career fairs by managing their emotions and asking recruiters the right questions to communicate better with the recruiter and make a good first impression. Through this usability testing, we want to gain a better understanding of how the users will interact with this application and perform their tasks. Remember, it's the prototyping that is being tested and not you. Any problems or issues that you come across is a defect with our design and not your fault. At the end of the test, we will have more time to talk about any questions or concerns that you may have considering our design.

Questions/Instruction:

1. What's the one thing that you would do the first on home screen? User presses the panic button.
2. How are you feeling at the moment? Selects what went wrong and how she is feeling at the moment.
3. Was the advice/ tip helpful? Gives feedback as helpful or not helpful for the advice/ tip she gets.
4. Which company do you want to research? Goes to saved companies. Selects Airbnb, selects software developer position and taps on Pitch.
5. Do you want to edit your profile? Add any skills or roles interested in? Goes to profile screen on the top right and edits the roles interested in screen.

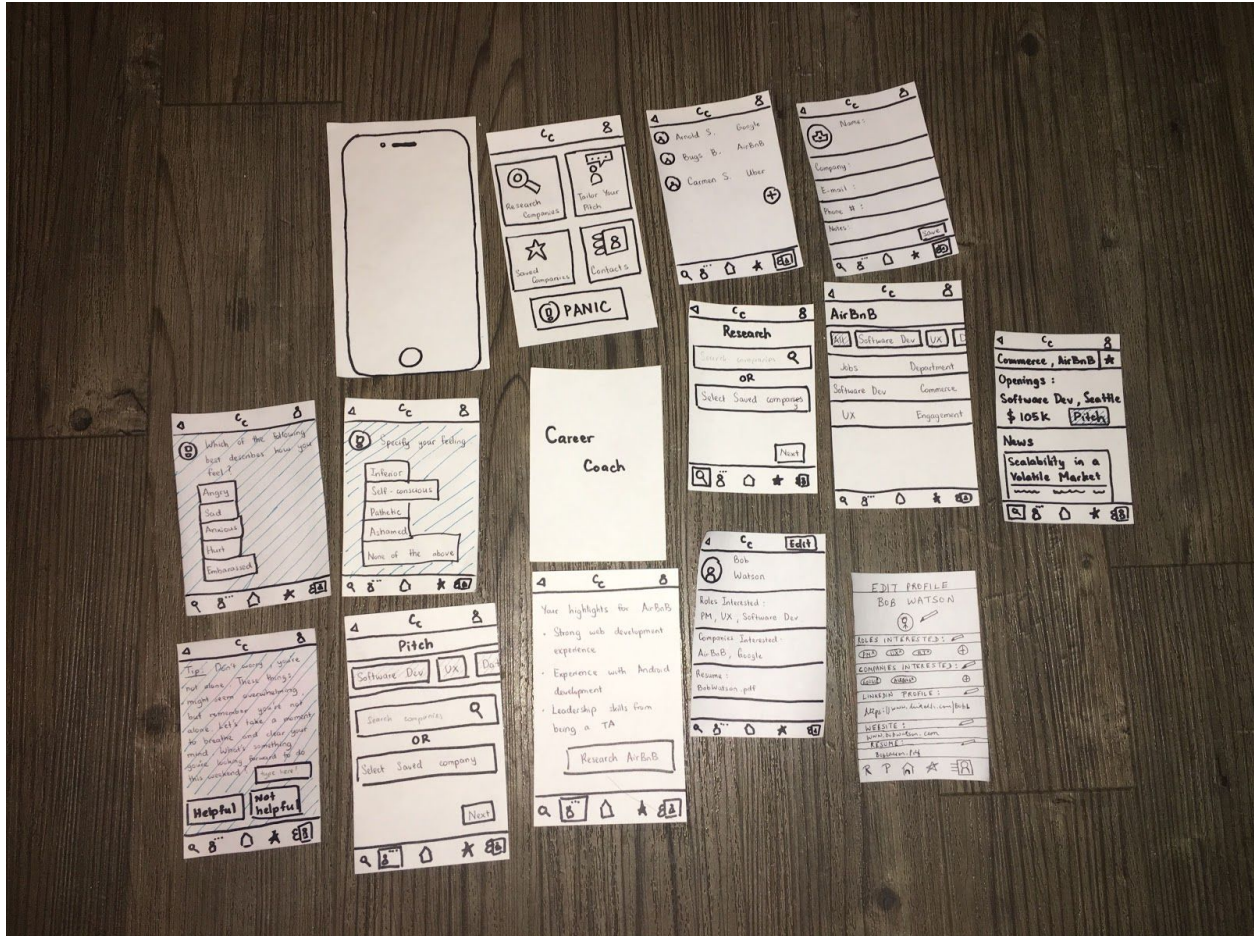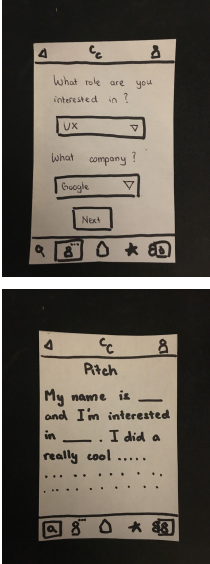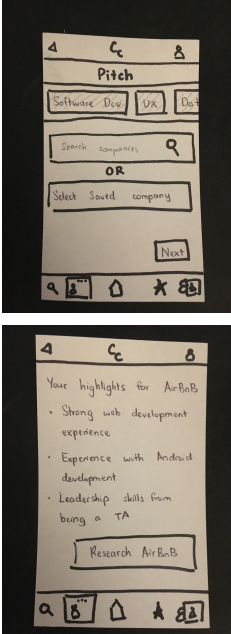Here are the materials involved and issues detected. (the next page)

Image	Heuristic Category	Issue	Severity	Revision	Revision image
	Match between system and the real world.	The word "Research" suggests research opportunities instead of researching companies.	2	We tried to change the tiles so the words are more clear and helpful.	

	Aesthetic and minimalist design / Consistency and standards.	The "Pitch" screen is almost totally different than the "Research" screen (not shown in this row of this table), so it's not consistent. The actual pitch (the second pic) is also not very helpful.	2	We tried to make it more consistent. And tried to make the actual pitch more helpful. And also we added the button "Research AirBnB" to allow user to instantly go to the company's screen.	

Usability test 3:

Test script:

We would like to thank you to take the time to participate in usability testing. The purpose of our project is to help introverts network better at career fairs by managing their emotions and asking recruiters the right questions to communicate better with the recruiter and make a good first impression. Through this usability testing, we want to gain a better understanding of how the users will interact with this application and perform their tasks. Remember, it's the prototyping that is
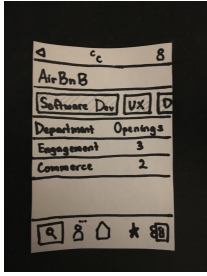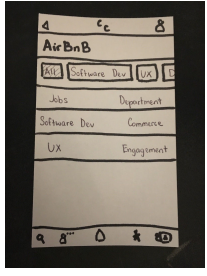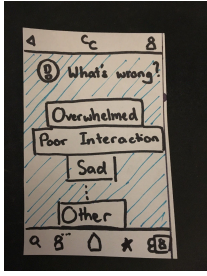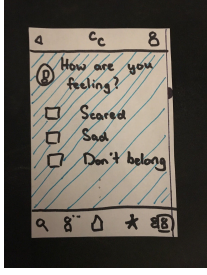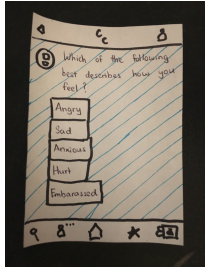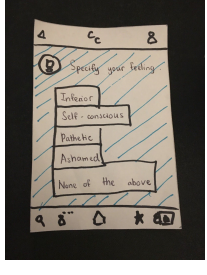
being tested and not you. Any problems or issues that you come across is a defect with our design and not your fault. At the end of the test, we will have more time to talk about any questions or concerns that you may have considering our design.

Questions/Instructions:

1. What's the one thing that you would do the first on home screen? User presses the panic button.
2. How are you feeling at the moment? Selects what went wrong and how she is feeling at the moment.
3. Was the advice/ tip helpful? Gives feedback as helpful or not helpful for the advice/ tip she gets.
4. Which company do you want to research? Goes to saved companies. Selects Airbnb, selects software developer position and taps on Pitch.
5. Do you want to edit your profile? Add any skills or roles interested in? Goes to profile screen on the top right and edits the roles interested in screen.

Here are the materials involved and issues detected. (materials are the same as usability test 2)

Image	Heuristic Category	Issue	Severity	Revision	Revision Image
	Match between system and the real world.	The 'Departments' tab was confusing to users. They didn't understand what 'commerce' meant.	4	To improve the clarity, we have removed any tabs and included columns instead. Listing 'commerce' under 'Departments' shows that commerce is a department.	
	User control and freedom.	What if the feeling that the user is experiencing is not in the list?	4	We revised the feelings screen today to include a broader range of feelings, that are categorised and can be specified in the second screen. However, we are still thinking about how to include a wider set of feelings.	

Note that in the picture of materials for usability test 2 and 3, the screens are actually the revised screen from those tests, and the screens before the revised screen can be seen in the tables.

Contribution Statement

Nicole - 25%: Edited entire document, rewrote sections, added task information about the earbud, wrote discussion section.

Alejandro - 25%: Contributed to Appendix, Digital Mockup. Edited the document.

Braydon - 25%: Problem and solution overview, task analysis of initial prototype, final paper prototype, reviewed and edited the testing process section, reviewed and edited the digital mockup section.

Ridhi - 25%: Edited the problem and solution overview based on Mandy's feedback from last report, wrote the test process and the test results, design critique, wrote the script and task for appendix and proofread the document.