Milestone 2

Part 1 - User research methods

In the requirements gathering phase of our project, we undertook two methods of user research; surveys and interviews. We conducted the surveys using Google Forms, which allows for real time analysis on collection, and provides a simple and intuitive interface in which to build the survey itself. Google's Forms software allowed us to deploy the survey and start seeing the results rapidly. In generating the survey questions, our goal was to create questions that would help us understand the broad requirements and expectations that our users would likely place on the resume building software we are designing. The responses to the survey provided us with an indication likely patterns of useage, expectations, and the frequency with which they might access our software. Survey questions are naturally interpreted as quantified data representing aggregate responses; with that understanding, the question format we chose to go with were multiple choice and one Likert scale question. Aggregate responses to multiple choice responses be visualised as percentage responses, such as in a pie chart; and the Likert scale question can be visualized as a bar chart to show the relative imporance that respondents place in the categories provided. The questions focussed around job application frequency, and resume updating behaviour, and finally we gueried what expectations they place on web-based system such as the one we are proposing. We felt that the survey was an effective research method to quickly gather data, and that its results would compliment the qualitative research that later interviews would provide. The survey was helpful in that we were able to create, deploy, and gather a large number of responses in a short time frame, which is an important consideration for this project. Furthermore, as the results of the survey were arriving, we were able to glean information which helped guide lines of questioning for our second research tool: interviews.

Overall, we conducted four interviews. The reason for interviews was to gain a deeper undestanding of the behaviours, preferences, and concerns than a survey could provide. We decided on four in order to balance competing interests; which were depth of understanding, and timeframe. As a mostly qualitative tool for investigation, the interviews provided a balance and contextualization to the quanitative outcomes of our survey. The interviews gave us deeper insights into the perspectives of potential users of our software, which was valuable information to draw from as we designed our project personas and scenarios. In advance of the interviews we prepared a list of suggested questions and themes to explore during our interviews. This allowed us to foster a more conversational tone with our interview participants, and let us explore certain lines of questioning that interested the interviewee more than others; instead of adhering to a strict line of questioning.

Part 2 - Instruments

Survey

The survey began with a disclaimer as to the purpose of our research and assured the participant's anonymity (the consent form is presented in Appendix 3). We then proceeded with the following questions in sequence¹:

- 1) When was the last time you applied for a job?
 - 1 4 months ago
 - 6 12 months ago
 - Over a vear
- 2) How many jobs have you applied to in the past year?
 - 0
 - 0 1-5
 - 0 6 15
 - Over 20

¹ An image of the survey depicting these questions as they appeared online to our participants is presented in Appendix 1, Figures *A1.1* and *A1.2*.

- 3) Where do you store copies of your resume?
 - OneDrive
 - Dropbox
 - Google Doc
 - iCloud
 - Your own PC
 - Other (please describe):
- 4) In the last year, about how many times would you say you edited your resume?
 - I have not edited my resume in over a year
 - once or twice
 - three to five times
 - six to ten times
 - more than ten times
- 5) Select the statement that you agree with most:

When Applying for Jobs:

- o I edit my resume for each potential employer.
- I edit my resume for a kind of job, and use the same resume to apply for multiple positions that match that job type.
- I have a few different resumes and try to pick which one matches the job I'm applying for.
- I use the same resume to apply for every job.
- 6) Imagine a service exists to help you create and edit your resumes; in terms of this service:

Please label the following statements in priority from low to high (where 1 is low, 5 is high):

- The security of my personal information is most important
- The service should provide customization features to suit my preferences
- The service must be very easy for me to use
- The service must be feature-rich.
- The services should be accessible through different platforms

Questions 1 though 5 were multiple choice selections, and question 6 allowed users to rank, on five-point scale, their percieved priority of the options provided.

We requested the opportunitiy to interview students using chat channels being used by co-op students; through this means, we were able to interview five suitable candidates. Their anonymity was assured, but they were asked to complete the survey as part of the interview in order to provide more contextual information as to how their responses vary relative to other survey participants. Our suggested bank of interview questions included, but was not limited to the following:

Introduction

- What are you studying right now?
- Was there any part of the survey that you wanted to provide more information about?

Frequency

- How many positions did you apply for last time you were "job-hunting"?
- Our How frequently do you update your resume to fit a new job you're applying for?
- How many work term did you take till now? (one work term = four months)

Behaviour-oriented Questions

- "What is the current process you take to preparing you resumes for job applications?"
- "What applications or tools do you use?"
- O How many version of Resume do you have?
- What storage systems do you use to save your resume files?
- How do you feel about resume writing? What about resume writing makes you feel that way?

Interests and Expectations

- What is the main function you intend to see when you use a resume application/website?
- What do you expect from a resume management system?

Privacy-oriented questions

- "What assurances would you need before feeling comfortable inputting personal information into a web-based application?"
- Which kind of privacy protection do you want when you unlock your resume account?

Ethics required questions

- Are you comfortable with us using your responses to this survey for the purposes of our
- project? Your name and other personally identifiable information will be kept anonymous.

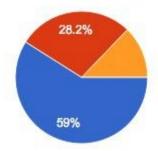
The interview responses are presented in Appendix 2.

Preliminary Findings

The results of the survey began arriving shortly after we began distributing the link to students. Google Forms presents real-time aggregate figures of these responses, and by the end of our collection period, we had recieved 39 responses. Below are the responses to our survey.

Figure 1 - responses to question 1 of the survey

When was the last time you applied for a job?

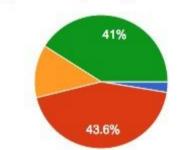


1 - 4 months ago 23 59% 6 - 12 months ago 11 28.2% Over a year 5 12.8%

Figure 2 shows that the majority of our survey respondants had last applied for a job within the last four months; half that amount had last applied for jobs more than half a year ago; and a small number of respondants had not applied for a job in over a year. Later, we realized that the question did have a flaw in it, in that participants who had applied to a job exactly 5 months ago might not know how to respond; we are hopeful that in these cases, the first or second answer would have been satisfactory to them.

Figure 2 - responses to question 2 of the survey

How many jobs have you applied to in the past year?

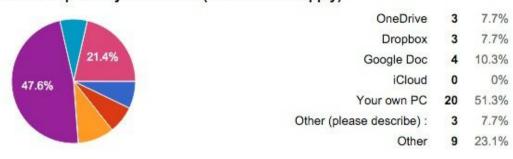


0 **1** 2.6% 1-5 **17** 43.6% 6-15 **5** 12.8% Over 20 **16** 41%

Figure 2 shows responses to the second question, which would has more targetted analysis of those people who had answered "1 - 4 months ago" or "6-12 months ago" in the previous question. Interestingly, while five people had previously stated that they had not applied to a job in over a year to the previous question, the results of this question showed that only one respondant applied to zero jobs in the last year. This inconsistent response demonstrates a problem with surveys, in that people's responses might be inconsistent from one question to the next. We recognize that the problem could be in either our question's phrasing, or in people's interpretation of the question.

Figure 3 - responses to question 3 of the survey

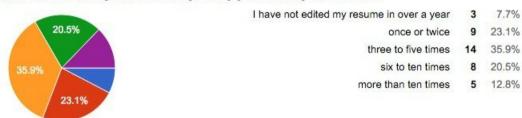
Where do you store copies of your resume (check all that apply)



Question three was actually posed as a multiple choice selection, despite the question stating "check all that apply". The reason for this is that we had mistakenly misconfigured the survey tool and had not allowed multiple checkbox responses; instead, participants had to select only one option. By the time this was noticed, we had already collected a large number of responses, and were unwilling to alter the question type and potentially lose the value of asking this quetsion as a simple multiple-choice. Many participants who wanted to express that they used multiple storage options took advantage of the text block beside the "other" selection to describe exactly that. Some unexpeced "other" responses included USB and the UVic Learning In Motion website (a coop student job posting portal).

Figure 4 - responses to question 4 of the survey

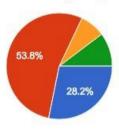
In the last year, about how many times would you say you edited your resume?



The response to question 4 revealed a more fractured outcome than previous questions, and a high deviation from the mean. The most popular response was from people claiming to edit their resume roughly three to five times over the course of a year. Combining this data with the results of question 2 fits into a pattern of job

application to resume editing at a frquency close to one-to-one for most people. However, the response curve to this question suggests that many people diverge from that pattern.

Figure 5 - responses to question 5 of the survey Select the statement that you agree with most:



I edit my resume for each potential employer. 11 28.2% by for multiple positions that match that job type. 21 53.8%

I edit my resume for a kind of job, and use the same resume to apply for multiple positions that match that job type. 21

I have a few different resumes and try to pick which one matches the job I'm applying for.

3 7.7%

I use the same resume to apply for every job. 4 10.3%

Question five responses showed that the largest portion of people edit their resume for a kind of job, and recirculate that resume for a large variety of employers offering similar positions. The second largest group of participants replied that they edit their resume for every single employer; but then a remaining portion edit it much less. This explains the platicurtic shape in the curve of responses of the previous question.

The final question of our survey was exploring the priorities that participants have toward a hypothetical resume storage system like the one we are designing. It was designed as a scale choice question where people were asked to prioritize from 1 to 5 the relative importance they would place in a proposed concept. The concepts that were percieved as most important were that "the service should provide customization features to suit my preferences" and that "the service must be very easy for me to use". Figures 6.1 through 6.5. To gain a better grasp on which of these concepts they prioritize over others, future versions of the survey could enforce a limit of one answer at each level of the scale, such as in a Likert scale.

Figure 6.1 - first choice of responses to question 6 of the survey

The security of my personal information is most important [Imagine a service exists to help you create and edit your resumes; in terms of this service:]

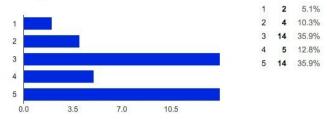


Figure 6.2 - second choice of responses to question 6 of the survey

The service should provide customization features to suit my preferences [Imagine a service exists to help you create and edit your resumes; in terms of this service:]

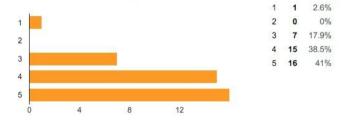


Figure 6.3 - third choice of responses to question 6 of the survey

The service must be very easy for me to use [Imagine a service exists to help you create and edit your resumes; in terms of this service:]

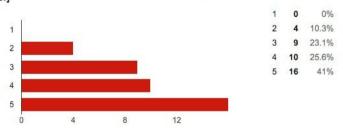


Figure 6.4 - fourth choice of responses to question 6 of the survey

The service must be feature-rich [Imagine a service exists to help you create and edit your resumes; in terms of this service:]

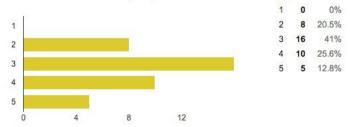
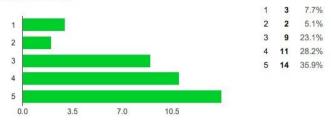


Figure 6.5 - fifth choice of responses to question 6 of the survey

The services should be accessible through different platforms [Imagine a service exists to help you create and edit your resumes; in terms of this service:]



The interviews we conducted provided us with useful insight in preparing our personas and scenarios. More generally, they shed light on the behaviours, processes, perspectives, and concerns around resume writing, and web-apps.

Introduction: Before we conducted interviews, we located our target users. Then, we confirms the interview time with them. For the next step, we prepare interview questions. When we want to interview co-op students, we found it is really difficult to make an appointment with them, because they are working during business day, and they often do extra work during the weekends. In order to save their time, we need to arrange our interview quesiton more accurate and tidy. At the beginning of the interview, we asked them the basic information, like their major, and year standing. We care about their job-hunting frequency, because we need to make sure users' resume work load when they write their resume. So that we can design our resume system to beef up their resume-working efficiency. And we asked them about their behaviour and interests to determine our design direction to satisfy their needs. We pay high attention on privacy, because resume contains many personal information, like cell phone number, and home address. At the end of the interview, our interviewees will often give us some suggestions for our resume system design.

Personas and Scenarios

Persona A



Josh, a fourth year Mechanical Engineering student at the University of Victoria is on the verge of completing his degree and currenly needs one more co-op work term to graduate. Josh knows that it takes a lot of effort to get a job offer, he has a lot of experience when it comes to writing resumes and applying to various companies. The process involves intensive and relentless job hunting, creating at least 20 different versions of his resume and applying for over 50 jobs. Josh saves different copies of

his resume on his PC, he boots up his trusty PC and opens multiple tabs, each tab is a copy of a resume with different skill sets and experience. Josh has undergone this process every year to get his last 3 work terms. He would love a system that simplifies this process, a system that allows him to manage his resume in a single sit down, a system that provides privacy protection, also a system that would be relatively easy to use. in anticipation that his last work term job hunt would not be too much of a hassle.

Scenario A

GOAL

Josh would like to successfully apply for his last work co-op work term and not go through the rigorous process he had to undertake when he applied to get his last three work terms.

STEPS

Josh finally decides to make use of our resume management system, he uploads all the versions of his resume to the system, the system sorts them out into blocks, grouping them by header names i.e Work experience, skills, etc. After a successful upload, he drags each required block onto the template to create his new resume. He saves the new copy as both a ".pdf" and ".docx" file

on our system, he also decides print out a copy.

CHALLENGES Josh would need to figure out where all 20 versions of his resumes are located, he would need to understand the order in which our system stores all the versions of his resume. He would also need to understand how the blocks are grouped in the system. He would also need to undertand how to use the pre-installed template.

Persona B



Amy, a 20-year-old student at the University of Victoria. Now she is in her second year studying a combined major program of Health Information Science and Computer Science. She just started the coop program this semester. and has written a basic resume for computer science coop. As Amy wants to apply for almost all the jobs posting on the coop website, she has to make changes to her resume to fit different positions. In addition, being new to

the process of developing new resumes and applying for multiple positions, Amy would like to to have a system to help her build new resumes based on her first written one. To seize more opprotunities, Amy has posted her resume onto some public websites such as Linkin, which included her Email address and phone number, onto a public website in order to get more responses from companies. However, after a few days, she received a huge amount of unsolicited phone calls. Thus, she pays utmost attention to privacy protection when she is under job hunting. She would love to have an App that can help her store the old version of resume without changing any format, and help to protect privacy.

Scenario B

GOAL

Make changes to old resume to fit in a new position with personal infomation secured.

STEPS

Amy is editing her resume again, it's a new term, she needs to apply for new position in the co-op system. This time, she finds a resume helping system called "i-Resume". Loading it for the first time, Amy needs to create an account and password. If Amy wants to view or make any changes to her resume in the future, she will need to login. After she logging in, she can choose to upload her original resume on clouds or just on her personal devices. Moving on to making changes to her old version resume, Amy added new content to her the "Projects and Skills" section of her resume, and saved it as version 2. Amy can retrieve old versions if she made any mistakes. She left to have a coffee break. After twenty minutes she came back, the system has automatically logged out for not making any changes in ten minutes, so she logged in again. Amy continued to edit her Resume.and saved the most satisfied version.

- CHALLENGES 1) Amy wants to quickly create a new account, so she uses a simple password. Then the system called out a warning "The password must include capital letters, and numbers".
 - 2) When using version control, Amy wants to retrieve her 2nd version of the Resume, but she deletes it by mistake instead. However, she find it in the "Recently deleted" folder of the version control system and restore it.
 - 3) Amy forgots to logout and leave the computer table, to protect her privacy, the system will automatically logged out for not making any changes in ten minutes.

Appendix 1

Figure A1.1 - The online survey, as it appeared to participants (continued in Figure A1.2)

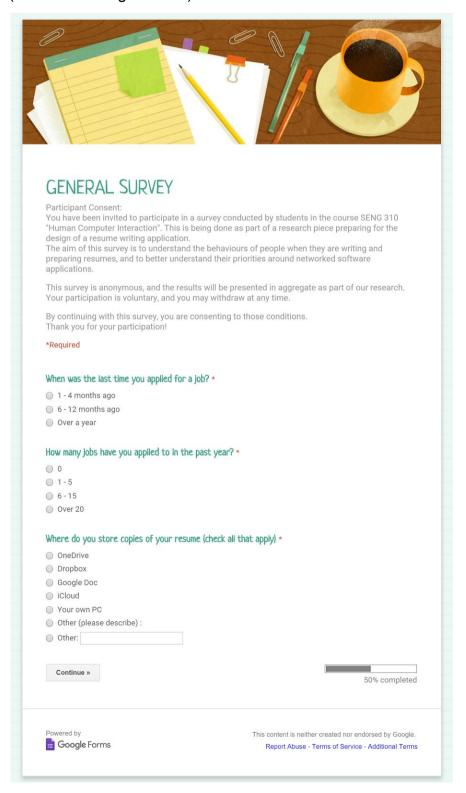
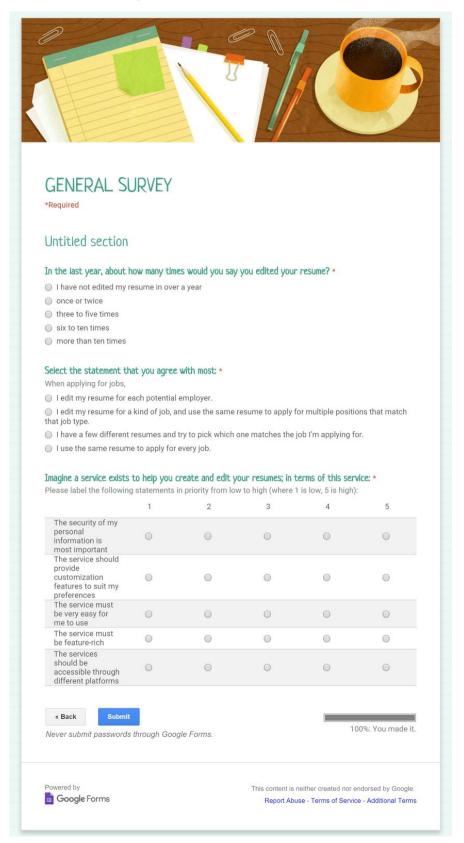


Figure A1.2 - The online survey, as it appeared to participants (continuation of Figure A1.1)



Appendix 2

INTERVIEW A

Introduction

- What are you studying right now?
 - o SENG, 3rd year
- Was there any part of the survey that you wanted to provide more information about?
 - the rating scale: 2 questions "does the app need to be feature ruch" = it should just serve it's purpose, core features should be visible, should not be cluttered with features I don't want to us
 - multiplatform question: typically edits all resumes on laptop doesn't need phone, would
- When were you last working, or are you working currently? (what was/is that job?)
 - o Technically, I am currently working
 - Last coop job was held 1 year ago: marketing analyst at a utility software management company

Frequency

- How many positions did you apply for last time you were "job-hunting"?
 - about 4 to 6 positions
- How frequently do you update your resume to fit a new job you're applying for?
 - small edits for each new application; no objective, just experience that relevant to the job
- How many work term did you take till now? (one work term = four months)
 - o 2 work terms

Behaviour-oriented Questions:

- "What is the current process you take to preparing you resumes for job applications?"
 - research the job type
 - open it up in a native editor (Word oin Win, pages on Mac) save on google drive
- "What applications or tools do you use?"
 - google drive
 - time capsule
- How many version of Resume do you have?
 - 7 different versions; one of which is a general purpose version that contains everything I've done.
 - depending on the position, I would make a refined variants of that general purpose one.
- What applications do you use to save them?(OneDrive, Dropbox, Google Doc, iCloud,or your own PC)
 - (already mentioned Word, Pages, and Google Docs from previous question)
- How do you feel about resume writing?
 - It is a tedious process, but it's also crucial and it's not a process I would ever skip. I always create a new version of my resume for the job.
 - I find it time consuming, but typically I just try to put that out of my mind as I'm editing resumes for positions; getting the job is always worth the time I spent editing my resume.
 - I get into a "mode" when firing off resumes to multiple employers, and it becomes easier once I'm in that "mode".
- What about resume writing makes you feel that way?
 - cover letters feel the most tedious part of resume updating
 - cover letters are supposed to be specific to the job I'm applying for, having to rewriting the cover letter many times wares me down and it feels like a repetitive task.

Privacy-oriented questions

- "What assurances would you need before feeling comfortable inputting personal information into a web-based application?"
 - My account and contents must be accessible singularly to me and me alone.
 - It would be important for me to know that I am the only person who is able to see my information, especially my other resume versions.
 - My "working" versions of resumes should not link anywhere, but I
 would be okay with the possibility to fire off a final product to other
 human-resources resume bank type sites for employers to access.
 - For example "Glass-Door" (n.b. this is a job hunting and posting site).
- Which kind of privacy protection do you want when you unlock your resume account? (finger-print, password, facial recognition, voice recognition, or combined any two of them)
 - O I have had good experiences with Single Sign On (SSO) using my Google Account. But definitely not single sign on with Facebook (he recounted a previous bad experience with a third party application posting stuff to his wall when he Facebook to sign into a different service, but he trusts this not to be a concern with his Google Account).
 - MW "What about LinkedIn SSO"? My Linked in account is not as developed as I would like it to be, so I would not likely use it to sign on to this service.

Ethics required questions:

- Are you comfortable with us using your responses to this survey for the purposes of our project? Your name and other personally identifiable information will be kept anonymous.
 - Yes

Expectation

- What is the main function you intend to see when you use a resume application/website?(Easily upload, One buttom print)
 - I was thinking about your application idea... I thought that a smart filtering system would really benefit this:
 - Example: if you're a Software Engineer and you're applying to a Game Development position, any past work experience that had to do with Embedded Systems for instance is not a priority in terms of that position; so, if the system could somehow intelligently filter those out, it might be helpful. That would be an extremely difficult to implement though.
 - What if the user were able to add metadata to their resumes or subsections of their resumes in order to help filter this way? being able to add metadata would be good, but might also be difficult for the user to do (not knowing what to include, what not to).
- What do you expect from a resume management system?
 - Just the idea of filtering things usefully, and the idea for version control.

INTERVIEW B

Introduction

- What are you studying right now?
 - Health information science combined computer science

Frequency

- How many work term did you take till now? (one work term = four months)
 - Two

Behaviour-oriented Questions

- What is the current process you take to preparing you resumes for job applications?
 - Depend on the My Project and personal skills
 - Based on the particular job.
 - 1) see application qualification
 - 2) See what they want
 - 3) See my summary, put the appropriate ones into my new version
- What applications or tools do you use?"
 - Microsoft word
- How many version of Resume do you have?
 - Two version (One for applying jobs in hinf, and one for jobs in csc)
 - But for Cover letter, I have more than 20
- What applications do you use to save them?(OneDrive, Dropbox, Google Doc, iCloud,or your own PC)
 - Dropbox and my own pc
- How do you feel about resume writing?
 - So damn hard
- What about resume writing makes you feel that way?
 - Resume need clear structure
 - The wording is hard.
 - As a non-English speaker, it's hard to explain my ideas.
 - You have no idea what kind of qualification your employer looking for

Privacy-oriented questions

- "What assurances would you need before feeling comfortable inputting personal information into a web-based application?"
 - NO public access (Functions like login(personal account) and password protection)

- Or like gmail's privacy protection (if the location of your ip address changed,send you email to alarm you,make sure it's you that log in)
- I'm glad to put it online or in app, you can not bring your pc around everywhere.If I wanted it to be printed, I can get it whenever I want.(as quick as possible)
- Which kind of privacy protection do you want when you unlock your resume account? (finger-print, password, facial recognition, voice recognition, or combined any two of them)
 - o combination of two of them
 - I'd like to be safe
 - I'm a security person.
 - My gmail +dropbox password is like over 20 digits.

Ethics required questions

- Are you comfortable with us using your responses to this survey for the purposes of our project? Your name and other personally identifiable information will be kept anonymous.
 - Yes

Expectation

- What is the main function you intend to see when you use a resume application/website?(Easily upload, One buttom print)
 - I'm expecting a lot of template
 - Easy modified format.
 - security.
 - Reason I need those functions:
 - Dropbox cannot edited.
 - Microsoft Word has too less template to use.

INTERVIEW C

Introduction

- What are you studying right now?
 - Computer Science 4-year standing
- Was there any part of the survey that you wanted to provide more information about?
 - No

Frequency

- How many positions did you apply for last time you were "job-hunting"?
 - Around 10 positions.
- How frequently do you update your resume to fit a new job you're applying for?
 - Every semester
- How many work term did you take till now? (one work term = four months)
 - o 2 work term

Behaviour-oriented Questions:

- "What is the current process you take to preparing you resumes for job applications?"
 - Update the skills part on my resume as well as the projects I have been working on.
- "What applications or tools do you use?"
 - o LinkedIn
- How many version of Resume do you have?
 - A master version and the others version depends on job posting
- What applications do you use to save them?(OneDrive, Dropbox, Google Doc, iCloud,or your own PC)
 - Dropbox

- How do you feel about resume writing?
 - o I use word for writing resume. And it's pretty good.
- What about resume writing makes you feel that way?

o

Privacy-oriented questions:

- "What assurances would you need before feeling comfortable inputting personal information into a web-based application?"
 - I have a choice to make my resume be public or not.
- Which kind of privacy protection do you want when you unlock your resume account? (finger-print, password, facial recognition, voice recognition, or combined any two of them)
 - Password is fine.

Ethics required questions:

- Are you comfortable with us using your responses to this survey for the purposes of our project? Your name and other personally identifiable information will be kept anonymous.
 - Yes

Expectation

- What is the main function you intend to see when you use a resume application/website?(Easily upload, One buttom print)
 - Easily upload and cross-platform shared data access.
- What do you expect from a resume management system?
 - multiple system support. For example, when I edit the resume on mac,
 then, even if I open it in windows, the format will not change.
- What kind of resume management system? Is that a system like LinkedIn
 which can be used to sell yourself or a system to be used on editing resume.

 I think linkedln is pretty good, your resume web can develop based on it.

INTERVIEW D

Introduction

- What are you studying right now?
 - Mechanical Engineering, 4th year
- Was there any part of the survey that you wanted to provide more information about?
 - o No

Frequency

- How many positions did you apply for last time you were "job-hunting"?
 - 3
- How frequently do you update your resume to fit a new job you're applying for?
 - o Every semester
- How many work term did you take till now? (one work term = four months)
 - 3 work terms

Behavior- oriented questions

- "What is the current process you take to preparing you resumes for job applications?"
 - Same format, edit new relevant info
- "What applications or tools do you use?"
 - Microsoft word, pdf
- How many version of Resume do you have?
 - 3 versions
- What applications do you use to save them?(OneDrive, Dropbox, Google Doc, iCloud,or your own PC)
 - Google drive, drop box, pc

- How do you feel about resume writing?
 - It's boring
 - What about resume writing makes you feel that way?
 - Because you have to make it suits different need and employers

Privacy -oriented

- "What assurances would you need before feeling comfortable inputting personal information into a web-based application?"
 - No distribution without consent
- Which kind of privacy protection do you want when you unlock your resume account? (finger-print, password, facial recognition, voice recognition, or combined any two of them)
 - Password

Ethics

- Are you comfortable with us using your responses to this survey for the purposes of our project? Your name and other personally identifiable information will be kept anonymous.
 - Yes

Expectation

- Easy upload, easy to create, option to publish in any format
- Spontaneous update of information

Appendix 3

Consent Form For Participation in the Study Entitled: "Designing and Evaluating a Resume Management Interface"

You are being invited to participate in a study entitled i-Resume that is being conducted by Mark Walle, Huiying Wang, Rui Ma, Saige Liu, and Adewale Adekoya. You may contact Mark Walle if you have further questions by email at mwalle@uvic.ca.

The purpose of this research project is to design and evaluate the user interface of a simple drawing tool. You will be interviewed about your previous use of drawing tools.

You will be asked to answer a series of questions about your experience with computer drawing tools, the tasks you use them for, the features you like, and new features you would like to have. You will also be asked for some demographic information (age, occupation, etc.). Your participation should require about 15 minutes of your time. The results will be reported in a project report for SENG 310 in the Faculty of Engineering at the University of Victoria.

Your participation is completely voluntary and you can withdraw from the study at any time, without explanation. You have the right to refuse to answer any questions you do not wish to answer.

Any data collected in the study will remain confidential; interview results and questionnaires will be kept in a locked filing cabinet in a locked office. Only the principal

and co-investigators will have access to the data. Your name will not be attached to any published results, and your anonymity will be protected by using code numbers to identify results obtained from individual subjects.

Whether you participate or choose not to participate will have no bearing on your grade/employment status/academic standing/job/services received.

By continuing with this survey, you are consenting to these conditions.