COMP 3008: Assignment #5

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PART 1: Cognitive Framework

A) The website selected for this section is https://www.linkedin.com/. My ***project will be a professional social media website that helps resolve any formatting issues for professional documents by offering templates for resumes, cover letters, and other professional documents***. Employers can choose from an array of pre-made templates that they feel best helps them get the information that they need. Prospective employees can then apply for a job by filling out one of these pre-made templates selected by employers. The Cognitive framework that I selected for this project is Activity Theory. This cognitive framework gives a developer a tool to analyze a website like LinkedIn and come up with new tools. In this case, the pre-made templates are the tool that could be developed to help achieve the goal of finding a job or finding an employee quickly by eliminating "tensions" between employer and employees that arise from the formatting of documents. Often prospective employees will develop resumes and cover letters in their own way, and this might be out of alignment with what the employer expects/wants. A template tool can help resolve this issue.

B) When considering a new design for my project, I analyzed the current LinkedIn website and applied ***Activity Theory***. One of the main goals of a site like LinkedIn is for professionals to find jobs and for employers to find employees. In the framework of Activity Theory this can be conceptualized as the subject(s) in pursuit of an objective. The subjects pursuing this objective form a community with various rules and perspectives, and as such, tensions are created on the path to reaching the goal. To alleviate these tensions, a tool can be created that helps to achieve the objective. For my project, one such tool is a template engine for resumes, cover letters, and other professional documents. A template tool is an externalization that helps with the issue of the various types of documents people make, often with a lack of sufficient or irrelevant information. With a template selected by employers, employers can pick outlines that will give them the information that they want. Employees in turn can save time not wondering as much about what the employer wants and wondering what kind of resume to make; employees can give the employers the relevant information pertinent to the job. This externalization helps ease the tension between different members of the professional community and help both parties reach the objective of finding a job/employee.

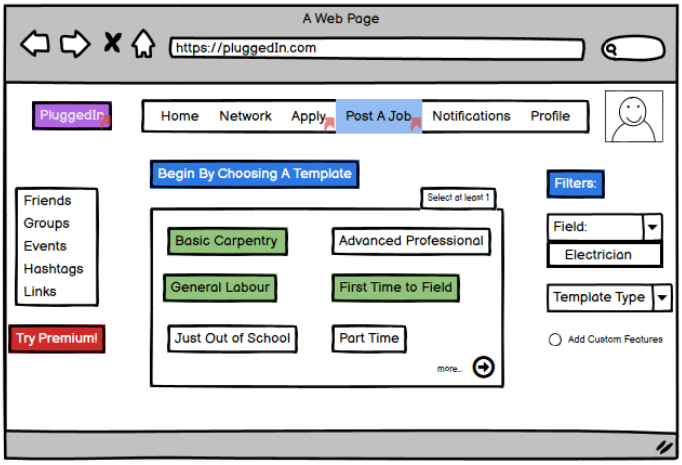

Figure 1: Post a Job by Selecting Different Templates

As seen in Figure 1, employers can select from a list of pre-made templates made from the community that will have job-specific elements required as part of the template. Employers will also be given the option to edit/customize and create a template, if desired.

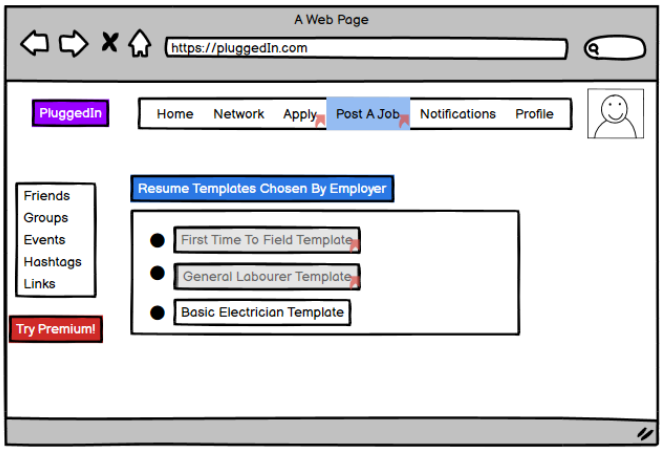

Figure 2: The Templates Available to Employees for that Job

Employees can then choose from and fill in the templates given by the employer for a specific job posting.

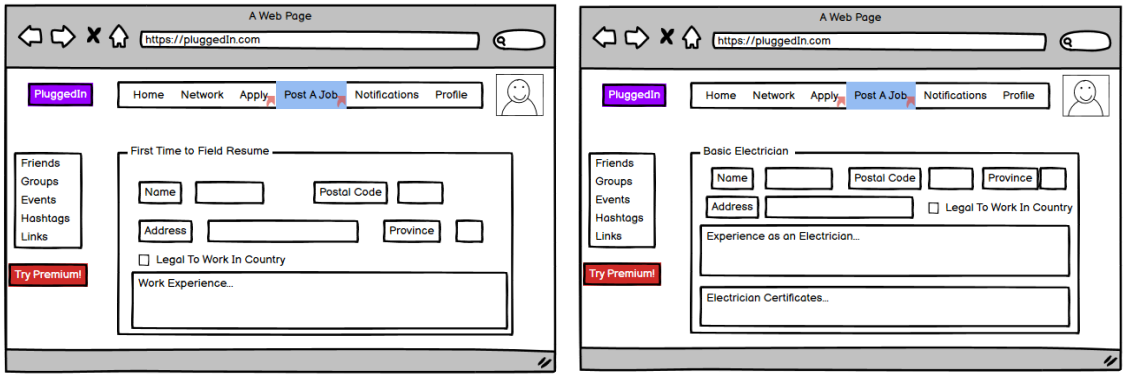

Figure 3: Different Templates the Employee Can Fill Out for a Job

This design is innovative in that it saves time on the part of employees and employers who are trying to find one another. Current LinkedIn does not appear to have this function, and so perhaps it could help users in reaching their goals.

PART 2: Emotional Interaction

A) I chose ***LinkedIn*** again for the second part of the assignment. My product will be a desktop application that serves as an ***interview practice tool***. The application will allow users to be recorded while speaking into a webcam, evaluating the users interview skills on volume, clarity, confidence, emotional stability, fear, micro-expressions and more. ***Emotional Interaction can be applied by taking data based on the user's emotions***. This data can be used to analyze the user and their behaviour which can then be used for feedback on their interview skills. Also, worth considering: the user's emotions entering the application – specifically, their fears/anxieties – should be taken into consideration.

B) By taking in the user's input such as body language, micro-expressions, facial expressions, and affective expression in speech -- pitch, volume, and how these contribute to the user's emotions -- the software will make an analysis about the state the individual is in, about whether they met interview requirements, and then will offer feedback to the user. A person hoping to land a job will likely want to come off as confident and not anxious. With the application being able to detect fear, eye contact, and more, it can then signal this to the user, who in turn can use this input to improve their interview skills. Effectively, this application is comparable to talking in the mirror, but with helpful feedback. To avoid adding further anxiety, users can choose from a selection of virtual anthropomorphic characters who can offer helpful tips. Ideally, the user would experiment with each character to find one that they are comfortable with to avoid adding further anxiety to the process. Users can also select to have no character if desired. This is important as performing the task of a fake interview is stressful for many people.

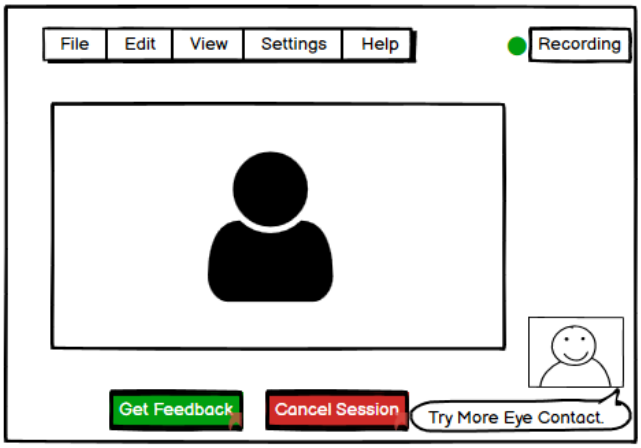

Figure 4: The Webcam display (the middle of the screen) will show the user practicing the interview. Helpful hints are offered by the virtual character on the side.

Users will begin by pressing "Record", then perform the interview practice, and then click feedback for a review of how they performed. Ideally, the software developers will work with interview professionals to develop reliable software that analyzes the user's emotions and offers helpful feedback.

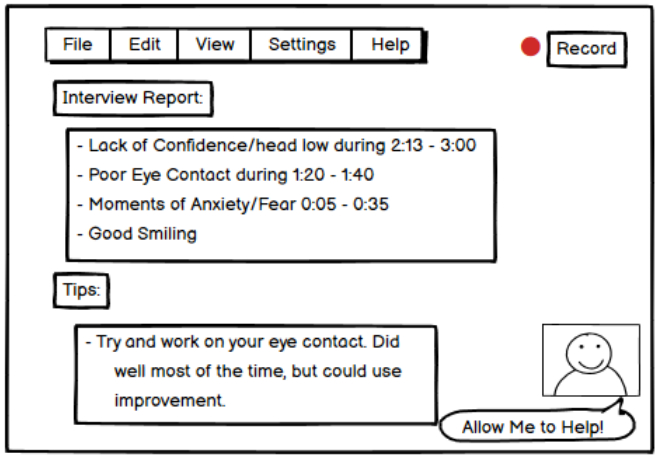

Figure 5: Feedback will be given to the user.

This design is innovative as I don't believe there is currently a tool like this on the market. It takes a practice that employees use (practicing interviews in the mirror) and adds a helpful feature that will give relatively objective feedback while taking into consideration the users emotions to help the user improve their interview skills.

PART 3: Information Visualization

A) The website I decided to use for this part of the assignment is ***canadiankitecompany.com***. The project I decided to work on is a ***mobile weather map application for people who fly kites***. The website will offer an interface that shows the best areas to fly a kite in a local area. Information Visualization can play a significant part in this project by representing data through maps provided to the user. The maps will allow interactive and visual representations of data.

B) By representing data about weather conditions for requested areas, this application leverages principles of Information Visualization to help kite flyers find places to fly their kites. With up-to-date visual data like the wind speed, direction, and popular flying areas, kite flyers can find the best areas to fly. The application also allows for an opportunity for community building as users can find other people with similar hobbies.

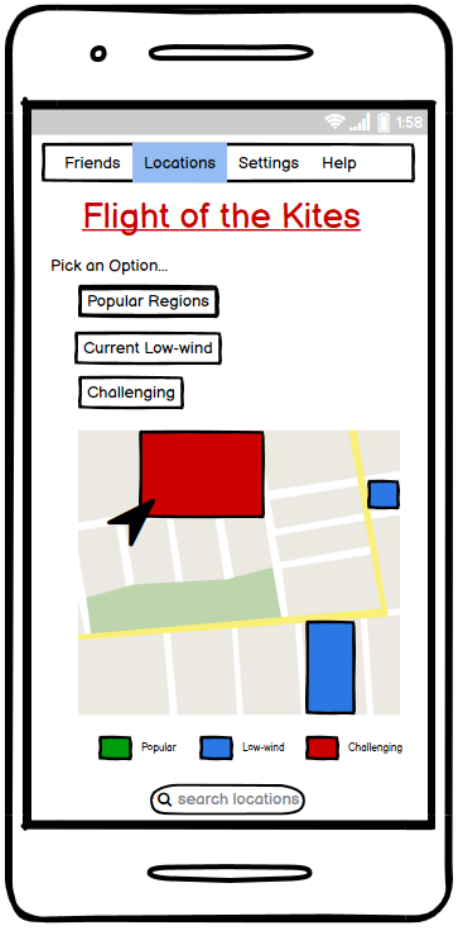

Figure 6: Map before Zooming-in On an Area

An example of Information Visualization can be seen in the application when the user goes to "Locations" and is presented with a map that shows different areas categorized by popularity, wind, challenging areas, and other metrics as seen in Figure 6.

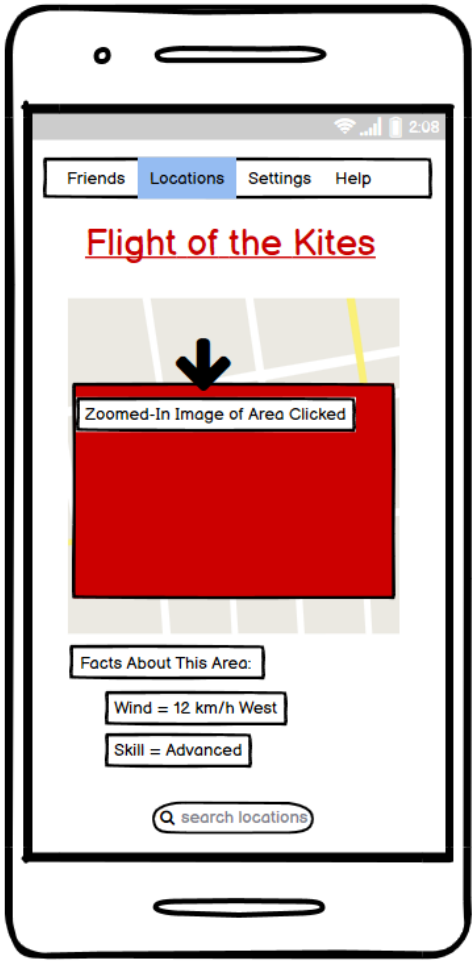

Figure 7: Inflated Area After Being Clicked.

A user can then click an area of the map to enlarge and get a more detailed picture of the area, along with weather conditions that may be relevant to the user's decision to fly a kite in that location.

This design is innovative because it uses Schneiderman's Information Visualization Mantra: Overview first, zoom and filter, then details on demand. The design does this by show a high-level representation of an area and allowing users to select an area for more details while also zooming in. The design also takes Mackinlay's Advice into consideration: discover and communicate knowledge. The user in this case is the discover of the knowledge and the application communicates the knowledge to the user, helping kite flyers make informed decisions. Also, there doesn't appear to be an application like this on the market directed at kite flyers.

APPENDIX: no sketches made for this assignment