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VR: Connect Survey

1. What is the problem you are solving?

   Our product VR: Connect takes a different approach to the traditional way of online dating apps such as Tinder, Bumble, and Coffee meets Bagel. These apps were fine at first since they allowed for you to be connected with someone who you did not know and allowed for you to communicate with them to schedule a date. But in the year of 2020, with the rise of a global pandemic it has become harder to do in person interactions with government imposed lockdowns and new social distancing restrictions. One of the main problems that we plan on solving is human loneliness. Also, we want to provide our users with the safest experience that is possible and nothing is more safe than being at home.

   Another problem that arises is how to match people of similar tastes and interests and we were able to solve this by providing the user with a quick survey to fill out. This application was coded with python and we used algorithms to best match people. By using the survey we can get an idea of what our users are looking for- this could range from age, common interests, and gender.

2. Why is it interesting?

   This is interesting since it allows for dating and virtual reality to be combined, this allows our users to be able to interact in the 3rd dimension. While there are dating

apps out there, none of them allow for the interactions that we as humans need. Being able to interact with a 3d environment is more fun than looking at a screen, texting your partner. Instead VR: Connect allows for all its users to interact and see each other in a simulated environment through the use of Virtual Reality technology. This allows for the users to be more active and stimulating for both the body and mind.

Our main application so far is the Survey Questionnaire Form, and this is interesting because it is coded with python and utilizes algorithms to match our users. By coding this application ourselves we can ask the users the important questions to quickly be able to identify suitable partners. By using the python GUI tkinter, we can make the buttons for the user to click and choose from.

3. What data have you used?

We gathered data from a random sample of users and constructed profiles that would be used to match up potential dates. Also, we conducted research on how to program using python and how to properly utilize the GUI tkinker features. This includes watching videos, resources from google such as stackoverflow for tutorials, and using the python textbook.

4. What are the roles your team members played while developing the project?
    a. Sven was the main programmer behind the application, while Michael focused on testing and debugging the application, researching information for each of the profiles, as well as documentation. We both assumed responsibility for coming up with the idea behind the project, as well as the main functionality of it. In this paper, Sven discussed the processes, and Michael discussed the theory behind the

application. They both worked very well with each other and coordinated tasks with end goals in mind.

5. Which algorithms/techniques/models have you used/developed? Be as specific as you can!
    a. We focused on a direct manipulation approach, where users press buttons to make selections instead of entering any text information. We used subtle colors, and short pieces of text in our application to lessen the visual load on the eyes of our users. Everything that the user selects is obvious and constantly displayed on the screen- there are no surprises, and the user does not have to deal with a huge memory load. Every action is reversible as well, encouraging our users to take risks and to be adventurous with their selections. Every action is clearly defined, and there is a reset button if the user makes any errors that they wish to instantly reverse. We also added a quit button directly in the window should the user want to exit at any point during the questionnaire.
6. Any problems you had or how you could do it better.
    a. The biggest problem we had while developing this project was the GUI programming. Due to our limited knowledge of this type of programming, we had to basically take a crash course over the last week and a half. If we had more experience with this type of programming, the project could have been more complex. If we knew a different type of programming, we might have been able to incorporate images as well as better functionality for the profiles. However, tkinter makes some of these processes difficult, and actually enabling images would've forced us to redo a lot of the programming, and time constraints just did

not allow for any of this. So bottom line, if we had more experience with this type of technology, we would have been able to have made a much more advanced application.

7. How did you test your project?
    a. Besides ourselves, we had several different people test out the different functionalities of our programs, such as the different gender options, as well as the various selections you can make, and the reset features which clear out the program. Several people ran into errors which we corrected as we found them, such as the reset button not clearing out every single selection, and the results button causing the program to freeze. We fixed these issues accordingly, and then had people re-test it all.
8. How will you measure success?
    a. This project is theory based, and obviously we are not testing matching up real people with actual profiles, so measuring success was a bit of a challenge. However, we decided to measure success based on the actual functionality of the application (whether or not it crashed, if the reset works, if the actions are completely reversible, etc.). As far as we are able to tell, every function of our application works well, and the transitions are extremely smooth. Given more time, we might be able to gather more data about how the application works when other users try it, but our test base was limited. Given the tests we were able to run however, we count our application as successful.

9. Reference list.

https://stackoverflow.com/questions/tagged/python

Textbook: Starting Out with Python 4th edition