

UVEC Hackathon Fall 2020

Jeet Ajmani & Poomrapee Chuthamsatid

Step 1: Planning

- Score allocation based on importance
 - Gender and gender preference is the first priority
 - The values are as follows:
 - gender = 20
 - distance = 30
 - age = 23
 - profession = 7
 - favorite music genre = 5
 - favorite animal = 2
 - smoking = 10
 - highest level of education = 2
 - astrological sign = 1

Step 1 (continued):

- If the gender and gender preference of two people match, then the lowest score they can have is 20
- The score for the distance between two people is reduced by $2^{(d/50)}$, where d is the distance
 - If the distance is less than 20km, the score awarded is 25
 - The lowest score in this category is 0. If the score is reduced by 25 or more, no score is added.
- If the difference in age is ± 5 , the score awarded is 23
 - Otherwise, the score is reduced by $2^{(a/3)}$, where a is the difference in age
 - The lowest score in this category is 0. If the score is reduced by 23 or more, no score is added.
- If the professions are the same, 7 points are awarded
 - Otherwise, if the two professions share a similar word, 5 points are awarded.
 - The lowest score in this category is 0

Step 1 (continued):

- If the favorite music genres are the same, 5 points are awarded
 - The lowest score in this category is 0
- If the favorite animals are the same, 2 points are awarded
 - The lowest score in this category is 0
- If both smoking choices are the same, 10 points are awarded
 - If both people smoke in any form, 7 points are awarded
 - If one person vapes and the other smokes but does not vape, 5 points are awarded
 - The lowest score in this category is 0
- If the highest level of education is the same, 2 points are awarded
 - Otherwise, each level of education is assigned a number from 1 to 5, where 1 is none and 5 is PhD. If the difference between the two levels is 1, 1 point is awarded.
 - The lowest score in this category is 0
- If the astrological signs are the same, 1 point is awarded
 - The lowest score in this category is 0

Step 2: Implementation

- The code for calculating the score was written in Python 3.7 with the use of the Python library csv to read from the csv file, and the external library geopy to calculate the distance between two sets of latitude and longitude coordinates.
- The script was then integrated with flask to make it available on the web
- The website supports the matching of two people by emails, and also shows the top 10 matches for any user.

Division of Labour

- Jeet coded the script in Python, and Poom used Flask to implement the script as a web application
- Throughout the duration of the project, GitHub was used to manage version control.
- Even when one person was working on an aspect, the other was consistently helping through screen sharing unless they were working on their own section.

That's all, thanks!
