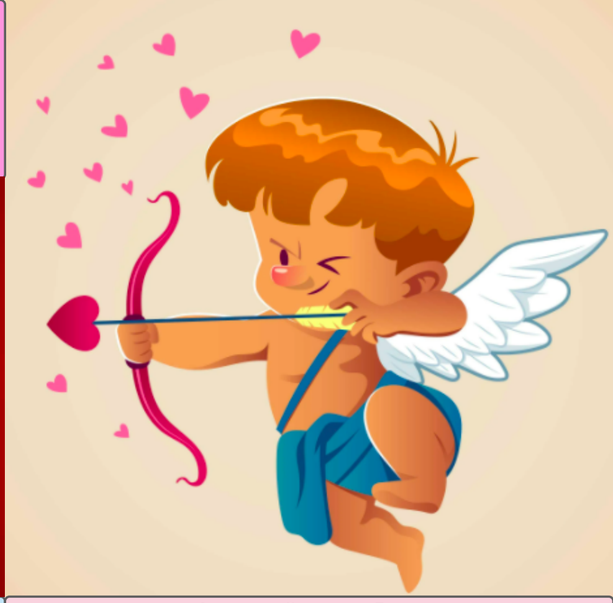
Dighum 100: Theory and Methods
Instructor: Adam Anderson
Tyler Freund, June 27, 2021

What does the Data reveal about Dating?

(Does your major say something about what your looking for in a partner?)



Research Questions and Study Objectives:

I hope to determine whether someone's major choice is correlated with the attributes that they value most in potential partners. Explore whether someone's field of study systematically changes their dating preferences.

- Do STEM majors vs. non-STEM majors systematically value certain attributes more/less? If so, which attributes?
- Which majors value intelligence most?
- Which majors value attractiveness most?

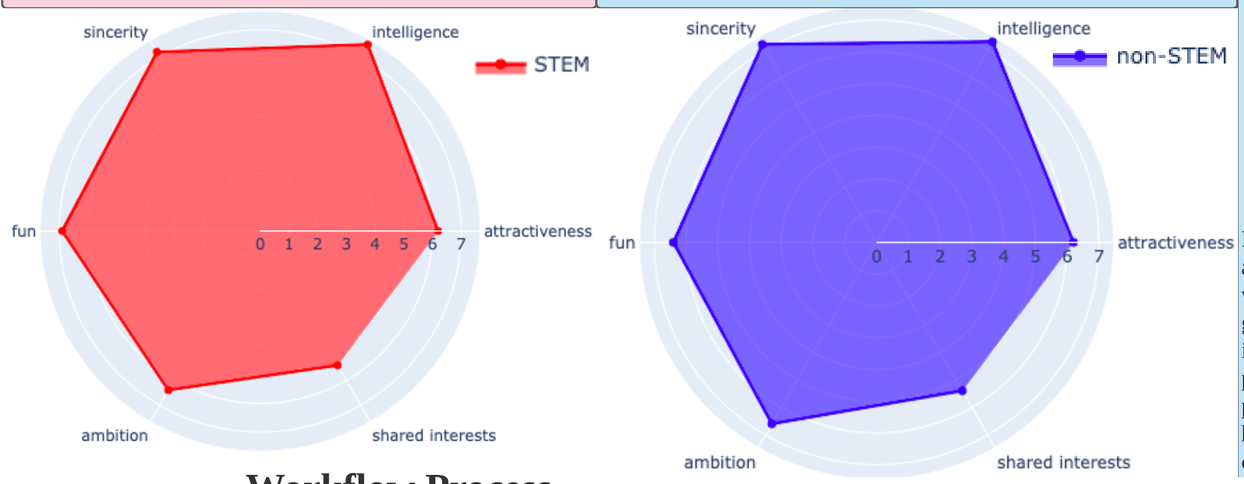
Data Description:

This dataset is from a series of speed dating events. The data includes an extensive list of variables about the participants including gender, race, major, age, intended career, most valued attributes of a partner, and much more.

Dataset:
https://www.kaggle.com/annavictoria/speed-dating-experimentggle

Tools and Methods:

- Download dataset, import csv to jupyter notebook, create dataframe with pandas package
- Split data set into STEM vs. non STEM. STEM includes math, engineering, sciences, and business/econ majors; all else non STEM. Add as new column to dataframe (1=STEM, 0=non-STEM)
- Find mean ranking (scale of 1-10) of each of the 6 attributes for STEM and then also for non-STEM
- Create 2 radar graphs using plotly package displaying these attribute preferences of STEM vs. non-STEM
- Next, focused only on attractiveness, find the mean valuation (scale 1-10) each major put on attractiveness for a potential partner
- Similarly, focused only on intelligence, find the mean valuation (scale 1-10 again) each major put on intelligence for a potential partner
- Create 2 barcharts of the top 5 majors ranking intelligence and attractiveness most highly
- Export visualizations and add to storyboard



Discussion of results:

- The first radar graph (the red graph with only STEM majors) shows the average rank that STEM majors put on each attribute which ranged from 5-8 out of a maximum score of 10
- The second radar graph (the blue graph with only non-STEM majors) shows the average rank that non-STEM majors put on each attribute which also ranged from 5-8 out of a maximum score of 10
- The radar graphs ended up being eerily similar to each other indicating that there was evidence of little to no difference in attribute preferences between STEM and non-STEM majors
- The bar chart with inetlligence on the y-axis displays the top 5 majors who ranked intelligence most highly
- The bar chart with attractiveness on the y-axis displays the top 5 majors who ranked attractiveness most highly

I expected to find some type of correlation between the major and the attributes preferred in a partner. I orginally hypothesized that STEM majors would have signifcantly different preferences but by comparing the radar graphs there are clearly little if any differences in preferences. As for the intellgience attribute I suspected that the most rigorous majors would perhaps value intelligence more highly than less rigorous majors. Similarly, I predicted to find that perhaps attractiveness would also be ranked signifcantly higher for a certain subset of majors. However, I failed to find any strong correlation between attractiveness or intelligence ranking and major choice.

Interpretation of results:

My overarching idea was that depending on what major you decide to study, it may say something about your personality and values; which in turn is observed in the dating attribute preferences from my dataset. Furthermore, I was interested to see which specific characteristics certain majors rank as most important, which may suggest the values/preferences of different majors in general. Some questions I wanted to explore in this dataset:

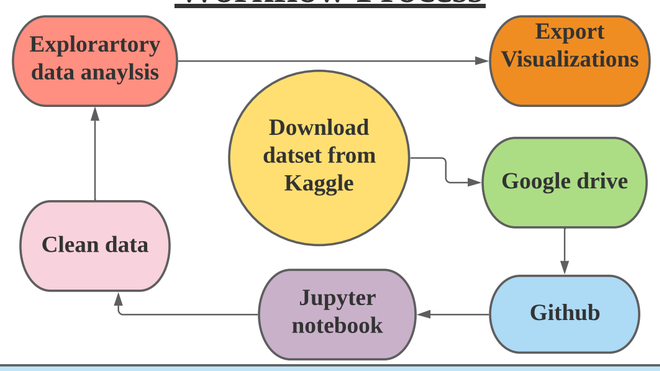
- Does attribute preference say something about the psychology of stem majors/non stem majors?
- Are people's attribute preferences leading to their major choice?
- Or conversely, are the majors causing the students to think in a certain way about attribute preferences?

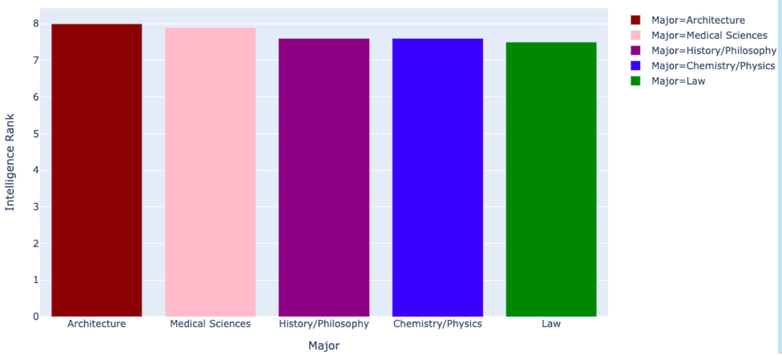
My hope was to find a clear trend in the dataset that suggested your major of choice was correlated with a certain attribute preference in a dating partner. More specifically, I hoped that this could be extrapolated to perhaps explain the pyschology and general preferences of certain majors. I became interested in this question because I learned about some studies in my Economics courses that suggested Economics students display signifcantly different decision making processes than non Economics students. However, I was dispointed to find that there was no strong evidence suggesting a pattern in the dataset one way or the other. In fact, the radar graph were nearly identical for STEM and non-STEM majors. While my original question I was interested in did not yield any interesting trends, I did actually find evidence against my hypothesis suggesting that they are actually quite similar to each other.

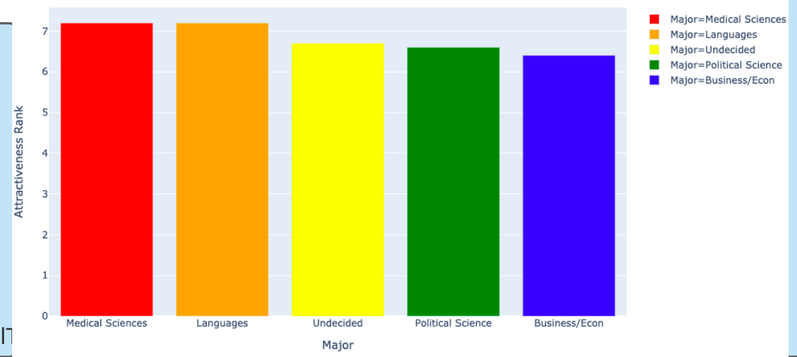
The range for both mean intelligence and mean attractiveness ranking was between 5-8 for both attributes; which shows that there were not signifcant differences in this measure either. I was surprised by this because I thought that I would find some majors did not care at all about attractiveness while others would see it as paramount. One possible confounding factor that came to my mind is that the responses were not confidential; so the participants may not have expressed their true preference sets; but rather, the preference sets that they thought would be most socially acceptable.

In conclusion, I was disappointed that through my analysis I did not find any obvious differences among the majors. But my study was not worthless, it still yielded evidence against my hypothesis; suggesting that your major choice might not be as large of a factor on your psychology, personality, and preferences as one might think. We are not defined by our major but rather shaped by our own unique experiences, friend groups, families, and environments.

Workflow Process







Citations/Sources:

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