Capstone Project Abstract

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Kie Gouveia

For my capstone project, I intend to make use of the YouthfulCities dataset. Specifically, I hope to leverage the Urban Attitudes Survey Results, as well as the YouthfulCities Index Ranking Sheet. Through my analysis, I hope to address the following research questions:

1. Which cities are perceived to be performing the best in areas that their youth indicate are important? Alternatively phrased: Which cities are aligned with the desires of their youth?
2. Conversely, which cities are perceived to be performing the worst in areas which their youth indicate are important? Alternatively phrased: In which cities does a gap exist between the offerings of the city and the desires of youth.
3. Is alignment between importance and performance a predictor for happiness among youth? Relatedly, is alignment between certain variables a better predictor of happiness? For example, is meeting expectations in youth employment a better predictor of happiness than meeting expectations in health services?
4. Based upon the relative (objective) performance of cities according to the Index Ranking Sheet dataset, where do youth expect the most from services, and where do they expect the least? For example, are there cities which have lower than average unemployment than most cities, yet youth believe that the city performs poorly on youth employment?

Questions 1 and 2 facilitate an understanding around which cities are meeting /failing to meet youth expectations, and in which areas there is room to improve.

Question 3 will illustrate areas where there may be a breakdown in communications. If a city is performing relatively well in areas that are important to youth, but youth perceive the city as performing poorly, then there may be an opportunity for the city to raise awareness about that particular offering.

Question 4 allows for an exploration into the effects of meeting youth expectations in areas that are important to them, and could provide insight into the impact of city design and public policy on mental health.

In determining whether alignment is related to happiness, it may make sense to leverage regression or classification techniques in order to generate a useful model. If resources allow, I also hope to generate a useful, interactive visualization to display the findings of my research.

To conduct this analysis, I intend to do some slight preprocessing in excel, followed by exporting the data to a relational database such as MySQL. I then will use R to access and analyze the data followed by Rshiny, Tableau or Leaflet to generate an interactive visualization that will bring the findings to life.