Visualization Technologies 1
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Final Project Writeup

For my project, I was interested in using data from Somerville's happiness survey. I first found the data last semester but did not have a clear idea of what I wanted to try and do with it. Initial plans for the final project in this class looked to use the data in answering two core questions: (1) what is the happiest combination of factors? And (2), what are the three most influential factors when it comes to happiness or a lack thereof? After struggling with the data analysis necessary to answer such questions, I turned to the City of Somerville itself for help. Working with analysts at SomerStat, the city of Somerville's in-house data collection and analysis department, the project shifted its aim as I focused less on what the survey might tell us about general determinants of happiness and more on how the city itself analyses and makes use of the data in making more informed policy decisions.

Due to my reliance on the city's analysis for figures like the "maximum effect" rating, I was partially constrained in my narrative approach. To compensate for this constraint, I leaned more heavily on the aesthetic visualization of the data and the project more broadly, making use of AI2HTML, Adobe Illustrator, RoughViz.js, and Scrollama in making a dynamic and novel presentation of the data. RoughViz.js is relatively restrictive in my experience, requiring data to be shaped and fed to it in very particular ways. As a result, I ultimately ended up creating the chart datasets through Excel pivot tables. This more rudimentary platform allowed me to better understand the structure of data that was necessary for the chart function to work properly.

I initially set out to follow a martini glass structure in my project, a goal I somewhat accomplished. Due to an exceptional amount of project time being taken up by issues with data

analysis, I was not able to implement the full scale of disaggregated, exploratory data visualization at the end of the story as I originally intended. However, I was able to work with the constraints of the RoughViz.js library and create an interactive line chart for the user to explore some of the data findings more in-depth than was possible earlier in the project.

Moving forward, I would like to create more customized encodings for the data by combining d3.js with the Rough.js library (the underlying library behind RoughViz.js that creates the illustrated aesthetics of the charts). I would also like to create more opportunities in the project for user interaction. One basic example of that would involve asking the user to rate their own happiness and then providing them with real-time aggregated data about the happiness ratings of recent readers who came before them.