

Kevin Kissinger

Medication Adherence

Link to GitHub Repository

<https://github.com/kevinkissinger/isba-4715-project>

Job Description

I selected this job because it is something that I actually applied and interviewed for. I am very interested to use data analytics in the health care field because I want to be in a position where I am actively helping people.

This is relevant to my career goals because an internship in health care would be key to setting me up for higher data analytics positions in the field.

The job is of interest to me because it focuses on specifically data analytics. I have many of the skills listed under the description, so I feel like I would be a good fit for the position. I also like how they emphasize teamwork and communication, soft skills which I feel like I possess.

Problem

I plan to solve the problem of medication adherence. Many people don't adhere to how their medications should be used which results in a worsening of their condition.

This is relevant to the job because it has to do with patient care and analyzing how the care and

systems can be improved. I definitely think this problem can be solved using SQL and visualization tools.

Data Sources

I plan to use the HAPI API to collect my data. They have patient records and information along with medication information. They also have metrics such as proportion of days covered and medication possession ratio which I can use to analyze how patients have been adhering to their medications.

I plan to web scrape [drugs.com](https://www.drugs.com) for additional information on prescription medications and how they should be used.

These are both relevant to the job and problem because they give me data on patients as well as the medications they have been prescribed and how they should be used.

Solution

I plan to use this data to identify any patterns or common characteristics that relate to why patients are not adhering to their medications. If there are any predictors to non adherence, those will be identified as well. This information could be used by doctors to identify patients that are more likely to not adhere to their medications and give them more resources, such as personalized plans, simplified treatment, or education on their medicines.

I plan to use queries that show me data on patient demographics and trends that coincide with less medicine use. I plan on using bar charts to compare patient characteristics that do adhere to their medicines vs. those that do not. I also plan on using line charts to show trends overtime of medicine use.