Bree Flores
SQL GIA Analyst Project Proposal
https://github.com/breeflores129/sql-project

Job Description
  a. I selected this job because it is an entry-level full-time data analyst position in my hometown, Carlsbad, CA. GIA (Gemological Institute of America) is looking for individuals with a bachelor degree while requiring proficiency in SQL and Python and at least one data visualization tool.
  b. This job is very relevant to my career goals because it focuses on improving product development and management processes by analyzing large datasets to interpret trends and patterns.
  c. Aside from this job being in my hometown, it has always been a dream of mine to work for GIA in some capacity. I have always had a large passion for jewelry and this job combines that with my career goals of being a data analyst.

Problem
  a. The main business problem to be solved revolves around leveraging data analysis to improve product development and management processes.
  b. Product development is very relevant to GIA as they want to optimize their lab tools to improve grading results in terms of accuracy, detail and reach. GIA has many different sectors such as lab grading, education, and events where efficient and effective management processes are vital to the company.
  c. The problem is quite feasible to be solved with SQL by using data from other jewelry labs to see trends of what specific pieces are being sent in to be graded and therefore what equipment is best for those stones/ types of jewelry. It would also be helpful to look at and visualize jewelry trends in general.

Data Sources
  a. API
       - Description: GIA Report Results API that has all details about the reports given by the lab after stones are graded.
       - Relevance: This data is directly from GIA so it will be helpful to leverage their actual data to make productive insights for product management.
  b. Web scrape
       - Description: Tiffany.com, specifically their diamond jewelry section.
       - Relevance: To see the correlation between Tiffany's most sold pieces since all Tiffany diamonds are graded by GIA. Therefore, see the demand from one of the largest jewelry retailers and tailor the improvements of their lab products from there.

Solution

a. I plan to solve the problem with this data by looking at trends of jewelry and improve the specific lab products used for the types of stones in the jewelry. As well as see how leading retailers factor into GIA's decisions.

b. Some SQL queries will include filtering by date, specifically monthly and yearly sums of diamond jewelry from Tiffany. The visualizations used to address the problem will be the most popular styles among age groups. Also, a bar chart showing the frequency of lab equipment being used and its correlation to the report of the diamond such as its cut, clarity and weight.