billups

# Analysis Sample Instructions: Data Scientist

Data science and storytelling

## Overview

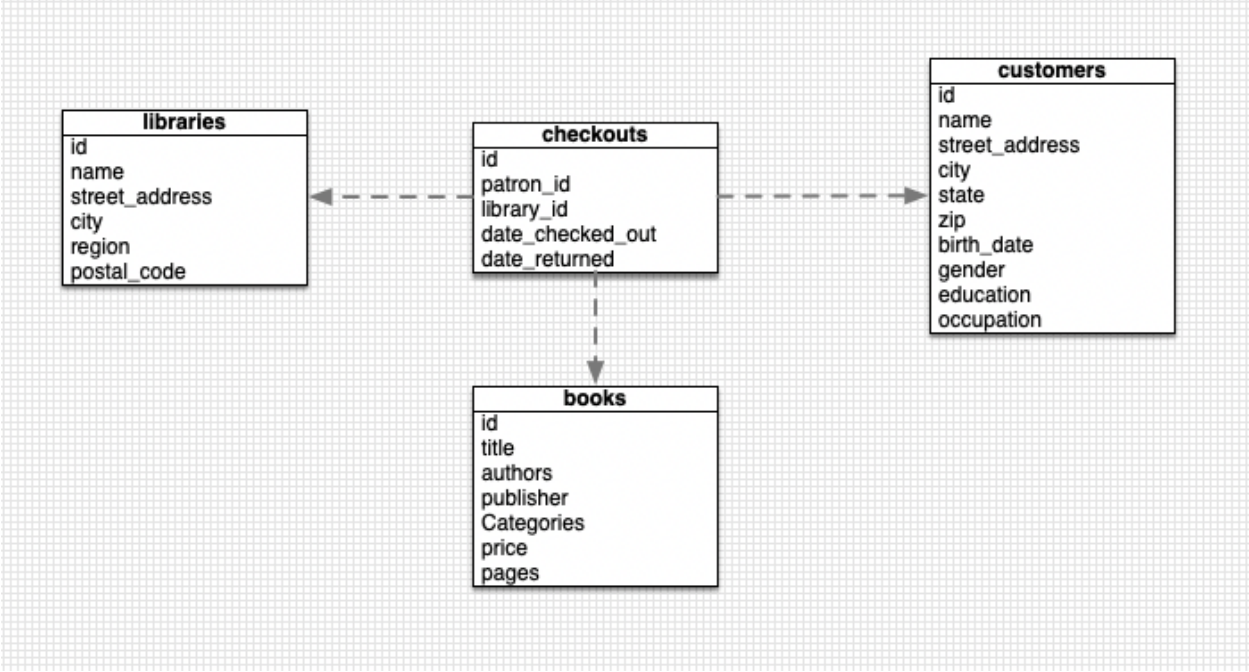
### The Background Story

We are being hired by a local library with a problem, their books are being checked out and then returned late way too often. They would love to understand the cause of the issue and what they can learn from the data to proactively monitor the situation going forward.

### The Mission

*(should you choose to accept)*

We'd like you to analyze the library data located here and help us build a model to predict the likelihood of a late return of any book at checkout time? Are there any factors you can find that are connected with late returns? What would you recommend the library do to mitigate the risks you find? How would you present your findings to them to get buy-in? The data has the following schema, each table is represented by one CSV file with the matching name.




**Good luck and happy analyzing!**

# Requirements

## Before starting...

- Take a moment to think about how long you think this will take to get done.
- Send an email to the address in the footer of this document as to when you'll have this complete.

## Submitting Your Work

- Post your full source code/notebook to a *public* repo on Github or your preferred source control website.
- Send an email to the address in the footer of this document with a link to the repository.

## General

- Use R or Python for the analysis.
- Include credits in your source of what you pulled from the internet (if anything).
- Books are considered late if they are not returned within 28 days of checkout.
- Please don't share the data or include it in your repo.

## Hints

- Ask questions to clarify as needed
- Answer the business questions posed above.
- Ensure that your notebook is a good representation of your style.
- Clearly document your thought process and any conclusions you reach.

# Bonus

- Do something fun or creative with your analysis!
- What other stories can you tell with this data?
- Compare multiple models and showcase their strengths and weaknesses