

# Homework 02

*DSO 545: Statistical Computing and Data Visualization*

*Spring 2018*

**Due Date: Feb 7, 2018 (11:59 pm)**

## Instructions

- This homework uses the an air passengers survey data (“flying.csv”). You can download it from blackboard.
- Please use **R Markdown Documents** to answer the following questions.
- Use R to answer all question. Write R code for each question.
- Make sure to include the R code you used. You won’t receive any credit if you don’t show the R code chunks.
- Submit your R Markdown and (pdf or word) documentation to blackboard
- I won’t tolerate any kind of cheating or late submissions.
- Good luck!

## Data Set Description

Traveling on an airplane could be sometimes annoying for many different reasons: reclining seats, babies, waking up a passenger to go to the bathroom, talking to strangers, etc...

The social contract involved in flying is nebulous, and one potential source of the strife in the skies could be that people vastly disagree about what’s considered rude.

To find out what people actually consider rude, we will analyze a survey that asked air passengers what’s cool and what isn’t. We had 1,040 respondents, 874 of whom had flown.



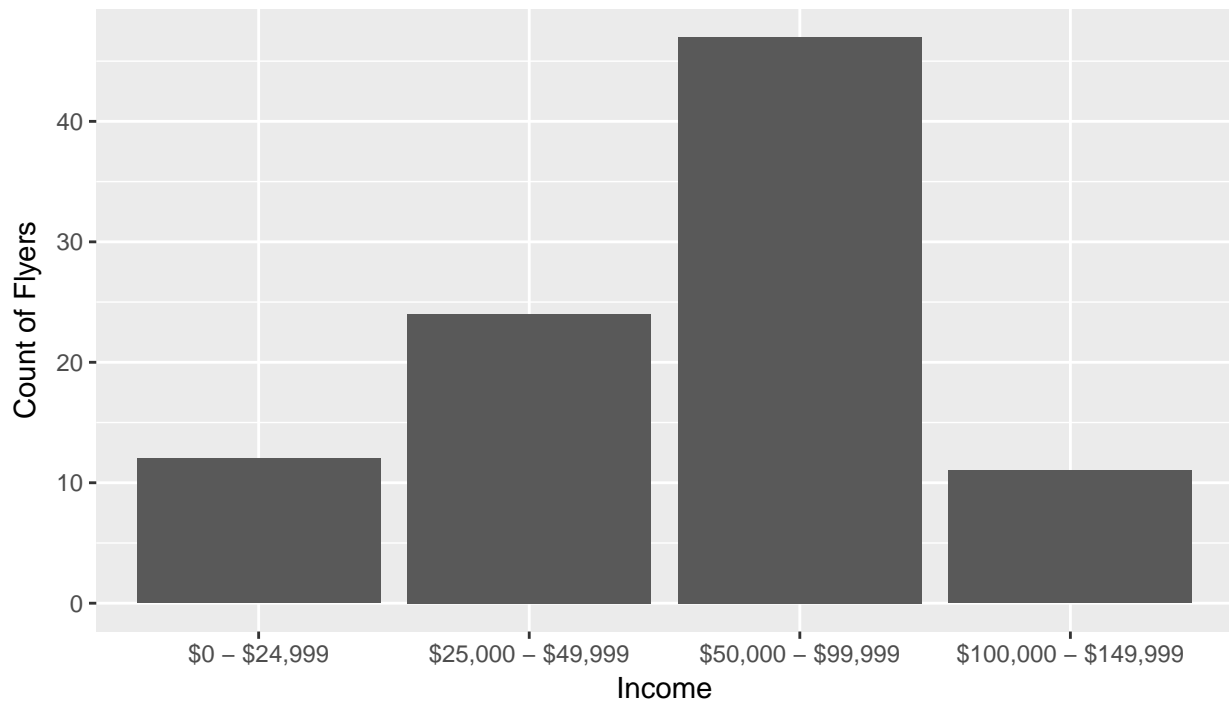
## Variables

Variable	Explanation
respondent_id	Respondent ID
gender	Gender
age	Age
height	Height
household_income	Household income bracket
frequency	How often do you travel by plane?
recline_frequency	Do you ever recline your seat when you fly?
recline_rude	Is it rude to recline your seat on a plane?
wake_up_bathroom	Is it rude to wake a passenger up if you are trying to go to the bathroom?
wake_up_walk	Is it rude to wake a passenger up if you are trying to walk around?
baby	In general, is it rude to bring a baby on a plane?
two_arm_rests	In a row of three seats, who should get to use the two arm rests?
shade	Who should have control over the window shade?
talk_stranger	Generally speaking, is it rude to say more than a few words to the stranger sitting next to you on a plane?

## Questions

- (1) (2 point) Use **dplyr** functions and the pipe operator **%>%** to divide the dataset into two dataframes: **males\_data** and **female\_data**. Each dataframe should include only the following variables: **respondent\_id**, **gender**, **baby**.
- (2) (2 points) What is the percentage of males who thinks that it is totally fine to bring a baby on the plane? What is the percentage of females who thinks that it is totally fine to bring a baby on the plane? Who is more tolerant?
- (3) (2 points) Compute the percentages of people who think that the following are very annoying. Which is the most annoying to fliers?
  - Bring a baby on a plane
  - Be chatty and talking to strangers
  - Wake someone up to go for a walk
  - Wake someone up to use the bathroom
- (4) (4 points) Create the following two plots.

Income Distribution for Females in the Age Range of 30–44



Income Distribution for Males in the Age Range of 30–44

