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Week 2: Univariate Descriptive Statistics > Pre-Lab > Examine the Data

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Reflect on the Question | Analyze the Data | Draw Conclusions

Lab 2: Austin Animal Shelter Data

Have you ever been curious about how long it takes for an animal to be adopted? To investigate questions like this, we contacted the Austin Animal Shelter and they provided us with information about 473 cats and dogs. Included in the dataset are information about how the animals arrived at the shelter, their sex, breed, age, weight, and the number of days spent in the shelter. The data is contained in *AnimalData.csv* and each variable is described in the codebook file.

Primary Research Question

How many days do animals spend in the shelter before they are adopted?

(3/3 points)

Check the Data

Let's begin by examining our data in R.

1. Open RStudio. Make sure you've installed the SDSFoundations package.
2. Type **`library(SDSFoundations)`** This will automatically load the data for the labs.
3. Type **`animaldata <- AnimalData`** This will assign the data to your Workspace.

- Week 3: Bivariate Distributions
- Week 4: Bivariate Distributions (Categorical Data)

4. Look at the spreadsheet view of the data to answer the following questions.

Alternatively, you can use follow the steps in the "Importing a Data Frame" R tutorial video, and use the AnimalData.csv file. (Right-click and "Save As.") Make sure to **name** the dataframe "animaldata" when importing.

1. Open RStudio.
2. Click on "Import Dataset" button at the top of the workspace window. Choose *"from text file."*
3. Click on the location of the AnimalData.csv file you just downloaded.
4. Click on the AnimalData.csv file. Then, click Upload.
5. Look at the spreadsheet view of the data to answer the following questions.

1a. How many variables are in this dataset?

24 ✔ **Answer:** 24

24

1b. How many of the first 10 animals in the dataset were adopted?

4 ✔ **Answer:** 4

4

1c. Was the first owner-surrendered animal in the dataset neutered?

No ✔ **Answer:** No

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions

(4/4 points)

Check the Variables of Interest

Let's find the variables we need to answer the question.

2a. What variable tells us the length of time an animal stayed in the shelter? The variable name in the dataset is:

Days.Shelter ✔ **Answer:** Days.Shelter

2b. What type of variable is this?

numerical ✔ **Answer:** numerical

2c. What variable tells us if the animal was adopted? The variable name in the dataset is:

Outcome.Type ✔ **Answer:** Outcome.Type

2d. What type of variable is this?

categorical ✔ **Answer:** categorical

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions

(2/2 points)

Reflect on the Method

Which method should we be using for this analysis and why?

3. We will use descriptive statistics to answer this question of interest. Why?

- We don't know what type of data we have, so these statistics will tell us.
- We want to determine if the animals stay in this shelter longer than they do in others.

- We want to explore the relationship between two variables.
- We want to describe the distribution of a quantitative variable. ✔

4. We should generate a histogram of the distribution before we calculate descriptive measures of center and spread. Why?

- We need to identify how many cases there are in the dataset.
- We need to know whether the data is quantitative or not.
- We need to check the shape of the distribution. ✔
- We need to identify which cases should be deleted.

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions