Chapter 7: Univariate and Descriptive Statistics

Exercises

Brian Fogarty

Exercise 1

Provide the mode, median, mean, standard deviation, and variance (where appropriate) for the recoded version of `vote2017_dum` (from the `VF England.csv` dataset) from Exercise 1 in Chapter 5.

Exercise 2

Provide the mode, median, mean, standard deviation, and variance (where appropriate) for the recoded version of `vfalter` (from the `VF England.csv` dataset) from Exercise 2 in Chapter 5.

Exercise 3

Provide the mode, median, mean, standard deviation, and variance (where appropriate) for `pct_depress` (percentage version of `DEPRESS` from the `simd2020.csv` dataset) from Exercise 4 in Chapter 5.

Exercise 4

Provide the mode, median, mean, standard deviation, and variance (where appropriate) for the categorised version of `pct_depress` (called `pct_depress_cat` in the answers) from Exercise 5 in Chapter 5.

Exercise 5

a. Mama Llama wants to know whether her cigarette smoking during the COVID-19 lockdown was excessive among the Glasgow llama population. You need to help her figure it out.

- Mama Llama smoked 60 cigarettes a week (x), while the mean llama smoking was 35 cigarettes a week (μ), and the standard deviation was 15 cigarettes a week (σ). Calculate the z-score.
- Using the `pnorm()` function and the calculated z-score, find the probability.
- Interpret the probability using plain language.

b. Mama Llama wants to know whether her current cigarette smoking, post-lockdown, is excessive in the Glasgow llama population.

- Mama Llama smokes 30 cigarettes a week (x), while the mean llama smoking is 25 cigarettes a week (μ), and the standard deviation is 12 cigarettes a week (σ). Calculate the z-score.
- Using the `pnorm()` function and the calculated z-score, find the probability.
- Interpret the probability using plain language.

For the answers see **Chapter 7 - Answers to Exercises**.