

Tutorial Business Analytics

Homework 1

Exercise 2.1: Describing the beer consumption on the Oktoberfest

- a) Read the provided CSV file ("Oktoberfest.csv") and store it in a tibble named *oct*.
- b) Which attributes does the data set have?
- c) What was the price of a beer in 1995?
- d) Based on the data set, when did the city of Munich first record the beer price?
- e) What is the value range of the attribute – *Visitors_Total* describing the total number of visitors in million in the corresponding year?
- f) Plot and describe the beer consumption over the years
- g) The number of visitors could provide an explanation to this observation. Create a scatter-plot that shows the number of visitors per year. Subsequently, calculate a statistic to validate or reject this explanation.

Exercise 2.2: Describing the beer price on the Oktoberfest

- a) What was the average beer price from 2000 to 2007?
- b) What was the variance of the beer price within this time frame?
- c) Add a new variable *difference* using the *mutate* function that describes the difference between the beer price of a year and the previous year.
- d) Plot these differences per year using *ggplot2*.