Sheet 0: Introduction

Task 1

continuous:
variable: time it takes to read a text
scale: ratio
discrete:
variable: number of words in a text
scale: ratio

Task 2

research question: Is DataCamp a helpful tool for Computer Science students?
population: Computer Science students in general
sample: Computer Science students currently registered at the University of Saarland
We believe, that usually in this field the CS students will be chosen from different universities.

Task 3

This is a not random sample of the population, because there may be something special to CS students of the UdS that is different for CS students in different universities. In this case the CS students of UdS will be overrepresented and CS students of other universities will be underrepresented.

Task 4

a)

independent: modes of transportation (nominal)
dependent: time (or rather duration) (ratio)

b)

independent: population measures (nominal)
dependent: number of "YES" or "NO" votes (nominal)

c)

independent: caffeine intake (ratio)
dependent: hunger level (quasi-interval)

Task 5

For some of the answers in this task, we have also give a short quote from the paper.

a)

We have chosen the paper "The Relationship between Profanity and Intelligence" [1]. In this work Giordano investigates weather there is a correlation between intelligence and cursing.

b)

population: people in general

c)

"All participants were Manhattan College undergraduate students. The ages ranged from 18 to 23 years old (M = 20.16). There were 15 females and 31 males in this study. There was one African American participant, six Asian, six Hispanic, three multiracial, and 30 white participants."

sample: Manhattan College undergraduate students

→ This sample is not random, because of many reasons, e.g. only a very small age range, only undergraduates and only people living in America. However, it is possible that older people swear less or more or that people who are not at an university have a lower IQ.

d)

Yes, we feel that there was a bias in the collection of data because the sample was not random. We think that the age, occupation and the place of residence of the participants could possibly affect the outcome.

e)

This is a corpus study, because we can not control the IQ test results of the participants.

f)

"The cursing survey was based on a 6-point Likert scale (Appendix A). The possible range of scores for each question on the cursing survey was 0 to 5 with 0 indicating the statement never applied to the participant and 5 indicating that the statement very frequently applied to the participant."

dependent variable: swearing degree

g)

"The IQ test used was the Wonderlic Personnel Test. It is a popular group intelligence test that is primarily used for assessing the work performance and problem solving skills of potential employees. Test items cover logical reasoning, vocabulary, and mathematical skills (Pollick, 2012). The participant is given 12 minutes to answer as many of the test's 50 questions as possible. No points are removed for wrong answers, so the participants were encouraged to answer as many questions as possible. Due to copyright issues, details about the test items will not be provided. The possible range of scores for the Wonderlic is 60 to 160."

independent variable: IQ test results

h)

- **dependent variable: discrete**
- **independent variable: discrete**

i)

- **dependent variable: quasi-interval**
- **independent variable: interval**

j)

"A linear regression analysis shows that there is no statistically significant relationship between the cursing or vocabulary factor and intelligence, $R2 = .304, p > .05$ *and* $R2 = .262, p > .05$."

statistical test: simple linear regression

k)

We think that this test was chosen because regression tests in general are used to test cause-and-effect relationships and in this case there is just one predictor and one outcome variable.

References

[1] F. Giordano, "The relationship between profanity and intelligence,"