Assignment 1

Introduction to Bayesian Data Analysis 2025

Student (#StudentID)

Preamble

- **Points**: Assignment 1 comprises of 6 tasks, 2 points each (12 in total). 2 points are obtained for complete and correct answers. 1 point is obtained for a proper approach or if only part of the task is solved.

- **Submission**: Hand in the assignment as a PDF report, rendered with `Quarto`/`Markdown`. The report should show the results, the code that produced the results, and additional text or comment. The report should appear clean and be uploaded on Moodle until Wednesday, June 04, 9:45 am.

- **Collaboration**: Reports can be handed in as team work (max. 2 people). When working in teams, declare this on page 2. However, each collaborator needs to hand in a report via Moodle, stating their name, student number (p. 1), and their machine specification (p. 2).

- **Permitted and Prohibited**: You may use materials from this class (e.g., slides on Moodle, code on GitHub) as well as online forums such as Stack Overflow to write your code. However, you are not allowed to post questions from the assignment online or prompt them (including paraphrases) to LLMs/chatbots. All use of LLMs/chatbots is generally not allowed. Solutions may not be shared with other students from the class (except 1 potential collaborator).

Authorship Information

1. Declaration of Collaboration

☐ Yes (Collaborator name)
☐ No

2. Declaration of Authorship

☐ I certify that this assignment represents my own work. I have not used any unauthorized or unacknowledged aids as stated in the preamble, including free or commercial systems or services offered on the internet or text generating systems embedded into software. I did not copy code from someone else nor did I share my code with someone else.

OR

☐ I certify that this assignment represents collaborative work by me and my collaborator listed below. I confirm that both contributed equally to this assignment and that we are equally responsible for the entirety of this report that we will receive the same grade on this report. I have not used any unauthorized or unacknowledged aids as stated in the preamble, including free or commercial systems or services offered on the internet or text generating systems embedded into software. I did not copy code nor did I share my code with someone other than my collaborator. I also found no indication for any such misconduct by collaborator.

3. System Information

☐ I confirm that I generated the submitted PDF report myself using R version 4.3.3 (2024-02-29 ucrt) and `Quarto/RMarkdown`.

Machine stamp: x86_64-w64-mingw32/x64 (64-bit)

Timestamp: 2025-05-25 20:47:53 CEST

```r
# load packages here
library(tidyverse)
```

Task Set 1

…

Task 1.1

…

```r
# write code here
```

Task 1.2

…

```r
# write code here
```

Task 1.3

…

```r
# write code here
```

Task Set 2

…

Task 2.1

…

```
#write code here
```

Task 2.2

…

```
#write code here
```

Task 2.3

…

```
#write code here
```