## Homework 2

## Total points: 20

1. Download a two sample multivariate data, where dimension of the data is larger than sample size of the data. Check whether the distributions associated with two samples are independent or not.

Points: 10

2. Download a data, which is suitable for non-parametric regression models. For this data, estimate the regression function and its first and second derivatives using local polynomial mean and median approach. Compare the performance of the estimators obtained from both approaches.

Points: 10

**Deadline:** Deadline of submission is February 12, 2024.

**Remark:** You can use any package or any programming language to carry out the study.