

University of Konstanz  
Department of Computer and Information Science  
Chair for Data Analysis and Visualization  
Dr. Johannes Fuchs

**Due: Monday, 31.01.2022, 12:00**

**Submission:**

\*.html file and \*.js file.

Additionally, you have to add comments to your code.

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**Task 1 (JavaScript):**

**(10 Points)**

Implement an online tool with the following functionalities:

- a) Setup a really abstract scatterplot by drawing an x-axis and a y-axis on the screen (1 Point).
- b) Be able to dynamically place data points (circles) on the screen.
  - a. The user can click on the screen to create a small circle at this exact position (2 Points).
  - b. Multiple data points (circles) can be created to fill the scatterplot (1 Point).
- c) Calculate and display summary statistics of the data points.
  - a. Calculate the average value of all data points for the x-coordinate and the y-coordinate separately (1 Points).
  - b. Calculate the standard deviation of all data points for the x-coordinate and the y-coordinate separately (2 Points).
  - c. Show these statistics in a text positioned at the mean coordinates of all data points (2 Point).
  - d. The statistics update after adding new data points (1 Point).

Example screenshot with 4 data points (circles) and the summary statistics as text:

## Assignment 11 - Data Statistics

