Contribution Statements

IML Missing Data Group

June 2022

1 Preamble

In this document, each group member concisely states some of his/her contributions to our project.

2 Members' Contribution Statements

2.1 David

- do the web design, write most of the HTML and CSS
- design the detail visualisation with the tiny squares on the visualize page
- take the role of the team leader in some of the weeks
- propose the data structure for the communication between back- and front-end
- big parts of the front-end code for the group page
- make the d3/observable templates available for use in react
- show the imputation errors on the impute page
- make sure we comply to the submission criteria
- do a lot of debugging

2.2 Michael

- propose project
- help organize the group
- suggest feature gradient visualization
- suggest three-tab layout [Visualize — Group — Impute]
- suggest automatic clustering pipeline with tSNE visualization

- push string-based selectors
- implement panel for uploading data
- implement string-based selectors on group page
- implement menu for selecting imputation options
- propose clean software architecture according to which we rewrote our code base at around the halfway point
- encourage clean coding practices
- suggest the name "NAmored" for the app
- write the group's report

-

2.3 Talu

- designed clustering pipeline
- implemented different clustering algorithms
- analyzed best practices for clustering the missing data
- created different heuristic approaches to data transformations for clustering
- implemented percentage availability per patient of all data
- implemented imputation methods as objects
- came up with and implemented imputation evaluations
- parallelized imputations for efficient computation
- came up with binary string imputation class to deal with non-number data with a different evaluation metric
- implemented asynchronous data storage from frontend to backend
- implemented communication between frontend and backend on the back-end side

2.4 Yan

- worked on clustering pipeline and visualization
- designed and implemented gradient visualization
- implemented download functionality for the imputed data
- was team leader for some of the weeks
- make class instead of function react components for the whole app