MTSI Dashboard Evaluation

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Second Evaluation Session - January 31, 2021

1. Pre-evaluation Questions

Please respond to these questions as elaborately as possible before you begin the evaluation process. Even if these questions were answered in a previous session, your response again will help use in nailing the details for the solution.

1. What added-value are you expecting from the system?

2. What are the interesting data that you expect the system to help you explore?

3. How could exploring the data help you meet your business goals?

4. What challenges are you currently facing in analyzing the data observed from the machines?

2. Evaluation

Report Requirements

In this stage, you will interact with the solution here: http://194.47.178.15/mtsiproject/, and note down the issues. The list of functions are listed in the following slide.

Describe Two Types of Issues:

1. Crashing errors (When an error is encountered, reload the solution before you proceed).

2. Logical flaws or system not functioning **as you expect** it.

Note the following about the errors:

- The task that caused the error.

- Last three tasks you performed before the error appeared.

2. Evaluation

Notes on Plots

Before you proceed to the next, here are a list of notes to keep in mind as you test the solution:

1- The PCA and t-SNE scatter plots indicate clusters of the data. The cluster color was determined by a k-means model against the reduced dimensionality features of PCA.

2- Heatmap values are normalized values of the data. The data in the Parallel coordinates plot (PCP) are the original processed data.

3- The original data is produced in processing the raw data by calculating the distance between the series data and its settings. Thus, for each data point, the temperature values displayed in the PCP is the deviation from the setting. exTorque, exPressure, exSpeed and Total Time are real data as no setting is provided.

2. Evaluation

Tasks Checklist

Explore the following functionalities several times with random sequences:

1- Selecting clusters in the Scatter point plots (T-SNE and PCA).

2- Selecting lines in the Parallel Coordinates graph.

3- Interactivity between all sets of graphs

4- Choosing data parameters/features to plot

5- Training t-SNE model with new settings

* For certain functionalities, please allow the system 5 seconds to update plots.

3. Post-evaluation

Report

Respond to these questions based on your evaluation of the solution:

1- What improvements have you noticed to the new design? Please comment on the improvements. Which one do you like? Which ones you do not like? What suggestions do you have?

2- How do you feel about the new User Interface? How do you feel about the color schemes? Do the colors make it easier or difficult to explore the solution?

3- How do you feel about the interactivity of plots? How are they useful? What is missing? Is there any missing feature you would like to see? How would you assess the time responsiveness of the plots?

4- What is missing? How could the dashboard be more useful to your business goals?

5 - Any final comments?

Please submit the final report by February 8, to:

mm223wa@student.lnu.se

THANK YOU FOR YOUR TIME