Data Mining and Decision Systems  
600092  
Assigned Coursework Report

Student ID: 201707408  
Date: 07 October 2019

## Due Date: 12 December 2019

# Methodology

The data will be analyzed using the crisp CRISP-DM. The data consists of visits to a hospital due to cardiovascular complications. The model being developed will be used to identify patents that are at risk, and therefore there are significant ramifications if the model is malformed therefore false negatives must be avoided when selecting a model. Data protection is also a significant concern however as we only have access to numerical identifiers and therefore identifying individuals would be extremely difficult.

## Data Cleaning

Due to the data containing invalid or incomplete values, cleaning was required. Removing or imputing these data values would allow for more consistent and accurate visualizing and models.

Using the data description as a guide **Data integrity**

Provide details on the methodology applied towards the data mining analysis undertaken, providing rationale for these steps.

This should detail how you went from the raw data provided to the chosen model(s), choice of model, and how this methodology helps address the problem domain.

Evidence to support the following of this methodology should be presented, especially any cases which required moving backwards in the process to readdress issues.

# Results

Results should include tables showing model performance with appropriately selected metrics. No rationale should be provided for this section - simply results of evaluative processes.

If using modified variants of the dataset, these should be clearly identified in the tables with appropriate naming. The justification and description of modification is not for this section.

Additional figures may be used as appropriate, in support of discussion points in the Evaluation & Discussion section, or as evidence for methodology following above.

# Evaluation & Discussion

Evaluation methodology used for generating the results provided in the previous section. How were these evaluated? Why was this selected? What metrics were used and why?

Discussion of the results should be presented with appropriate evidence and rationale. E.g Which is the best model, and why?

Consider each stage in the methodology, and reflect on any improvements which could have been made. Could any techniques have been used which may have improved performance? Why?

# References

Any references used throughout the report should be included here in Hull Harvard Style. If no references used, remove this section.