**Machine Learning | CA1 | Louis Wilkie | sba22529**

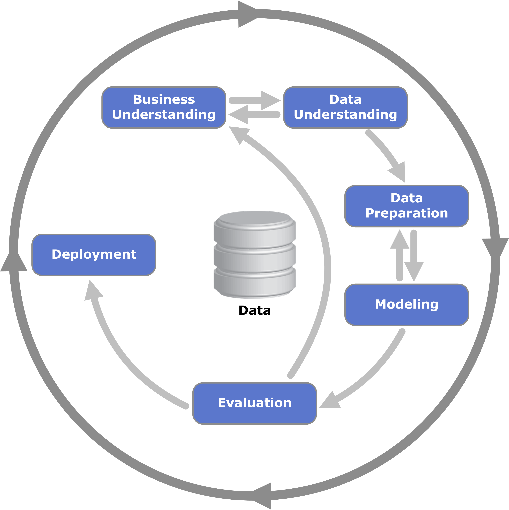
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**1. Introduction**

This assignment will analyse an airline customer satisfaction dataset. Supervised learning machine learning models will be developed for this dataset. Different models will be built to classify (Harrison, p. 105) if an entry in the dataset is *satisfied* or *dissatisfied.*

This dataset fits under the umbrella of transport as per the assignment requirements. More specifically, the dataset contains anonymised survey responses on an anonymised airline as *Invistico Airlines.*

This assignment thus poises to answer the questions: *Can Airline Customer Satisfaction be modelled? Which classification techniques can best represent the data being analysed? Which attributes contribute most to customer satisfaction?*

This project will follow the CRISP-DM framework, and the results below will be discussed through the lens of the CRISP-DM steps. This assignment has been completed by iterating through the CRISP-DM steps (Provost & Fawcett, p. 27), but the results will describe them chronologically.

Figure 1: CRISP-DM phases. source: Wikipedia

**2. Results**

**2.1 Business Understanding**

The business objectives of this project are given above as the questions the assignment will answer. As this project

**2.2 Data Understanding**

The dataset is titled “Airlines Customer satisfaction” and is sourced from Kaggle.com. The dataset is available here: <https://www.kaggle.com/datasets/sjleshrac/airlines-customer-satisfaction>. The dataset itself is fairly ‘clean’ with small null values

**References**

* Harrison, M. (2019). “Machine Learning Pocket Reference”, O’Reilly Media: Sebastopol.
* Kaggle (2019). “Airlines Customer Satisfaction”, Available at: <https://www.kaggle.com/datasets/sjleshrac/airlines-customer-satisfaction> (Accessed: 26/11/23).
* Provost & Fawcett. (2013). “Data Science for Business”, O’Reilly Media: Sebastopol.
* Wikipedia contributors (2023) “CRISP-DM process diagram.” In: Wikipedia. Available at: <https://upload.wikimedia.org/wikipedia/commons/b/b9/CRISP-DM_Process_Diagram.png> (Accessed: 26/11/23).