Medico Private Limited
Business Requirements Document (BRD)

Medico Private limited

February 2022

1 Introduction

1.1 Project Summary

1.1.1 Objectives

- The objective of machine learning is to discover patterns in your data and then make predictions.
- Enhancing performance of client's business of Medical devices by transforming the data into meaningful reporting
- Convert the data into graphical representation for internal teams to understand the business better
- Various department members like sales,marketing etc. will be able to see the progress & tracking of their performance from these charts from time to time and take steps accordingly
- Business owner will be able to take decisions should be based on an understanding of the business domain and the stakeholder needs

1.1.2 Background

Python is an interpreted programming language that supports the creation of a wide range of applications. Developers regard it as a great choice for Machine Learning because of large number of libraries and it's simplicity.

ML is the practice of getting computers to act without being explicitly programmed, organized in three main types .

Supervised learning finds mappings between input-output pairs based on labelled examples with the correct answer. This type of ML dominates industrial applications today, but requires high-quality data

Unsupervised learning identifies patterns in data without access to any labels. A typical application of this type of ML is clustering.

Reinforcement learning relies on a reward signal to quantify the ML performance.

1.1.3 Business Drivers

- Client is looking for having all the data in one place in graphical format
- Various internal teams within the client organization are going to use charts for the future research
- Client is responsible for managing all the data from various sources and dumping them at one place for further processing

1.2 Project Scope

It is to get a category for customer review. Clients will be able to use the graphical view for interpreting the various emotions of the clients and other quantitative measures available from the data and therefore make the changes in the organization accordingly.

1.2.1 Scope Functionality

Sales team

- Different Graphical Charts
- Prediction Model
- Expected Amount
- Complex Pattern
- Lead which converts into opportunity

HR team

- Word Cloud
- Categorical Reviews
- Update's in Real time

1.3 User Roles

Role	Description
Data_Scientist	▪ Establish connection with snowflake ▪ Make different Charts ▪ Categorise the review in real time ▪ Get useful insights ▪ Make predictions ▪ Manage Client requirements

1.4 System Perspective

1.4.1 Assumptions

- Data is cleaned and transformed
- You have to check the data for garbage-in/garbage-out i.e data quality.
- Data is historical
- Large data is present because "The model's performance was not good but we expect better performance if we have more data"
- Admin will manage the data access control
- Erroneous records are not considered for calculations

1.4.2 Constraints

- Trainings

- Additional dashboards or changes in features & functionalities described in document may require changing the time estimation of the project development
- Timeline for enterprise platform updates will impact development & testing, unless the environment is a sandbox

2. Architecture

3 Business Process Overview

- Client gets graphical data
- Get customer reviews category in real time
- You can predict your future decision
- They able to get insightful details
- View product performance
- Proceed for filtering region wise performance of the products
- End of review process.

Business Requirements

The requirements in this project are prioritized as follows:

Value	Rating	Description
1	Critical	Most Urgent and most important requirements.
2	High	Urgent but not as critical requirements and important requirements
3	Medium	Important but not urgent requirements
4	Low	Low Important and not urgent requirements
5	Future	Future scope requirements.

4.1 Functional Requirements

Req	Priority	Description	Rationale
FR-001	1	Asset and Sensor Neutrality	The key consideration is whether the solution functions in heterogeneous plant environments with data from all production assets
FR-002	2	Alert Generation	When a machine degradation or potential asset failure is detected, this is communicated to the relevant facility stakeholders
FR-003	3	Machine Learning methodology	Each Predictive Asset Maintenance solution is based on a Big Data methodology
FR-004	4	Asset Visualization	The key considerations when defining this requirement are the visualization of machine behavior and the ability to depict the health of machinery or the entire facility, and take specific action as a result.
FR-005	5	Purpose	Dataiku provides a centralized data platform that moves businesses from scale and traditional analytics to Enterprise AI

4.2 Non-Functional Requirements

ID	Requirement
NFR-001	Accuracy and performance: Most ML work reports on algorithm accuracy , how “correct” the output is compared to reality
NFR-002	Transparency: The results of ML can have significant real-world impact
NFR-003	Reliability :Work has considered reliability in ML, e.g., looking at the reliability of individual ML predictions
NFR-004	Maintainability :The ease with which the existing software can be modified.

NFR-005	interoperability :The ability for two systems to communicate effectively