Shubh Health

Project Plan

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Shubh Health- Project Plan

Introduction

Hospital treatment cost vary based on multiple factors like city, type of treatment, hospital.

Shubh Health intends make the treatment cost for some of the common ailments available at the time of admission. The packages will include cost of standard tests required for the treatment. This will save the patient time and anxiety to get a cost estimate for the treatment in a city of their choice, and also saves the hassle of identifying good hospitals, by creating a network of renowned hospitals.
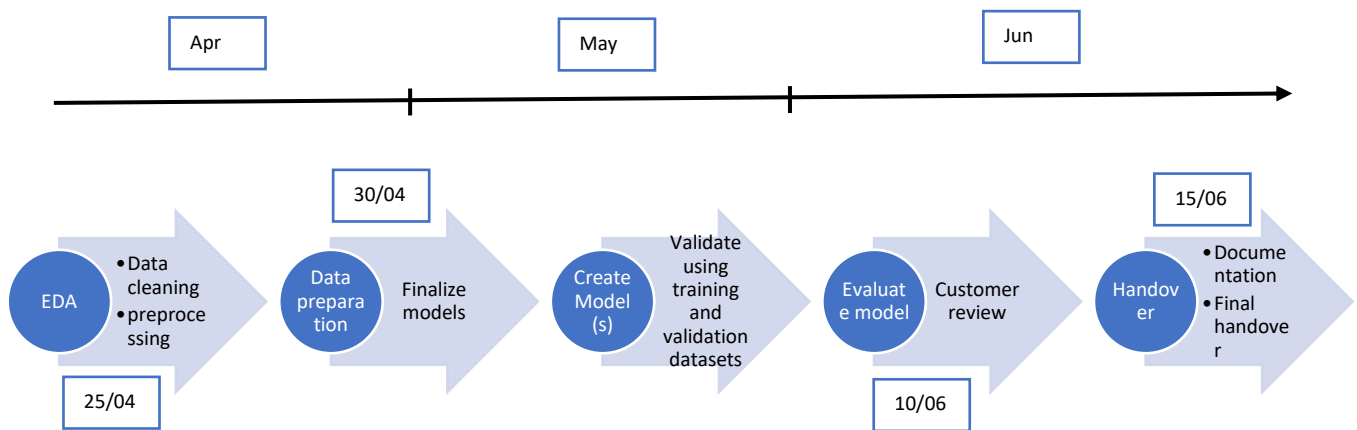
Project Overview

Create a Machine Learning model to predict optimal package price for treatment based on few factors such as length of stay, type of room, comorbidities, etc. During the time of admission, following information is also filled in by the patient.
   i.   Which Surgery
   ii. Room Type
   iii. City if India , else Country
   iv. Cash / Insurance / Govt Scheme
   v.   Co Morbidities
   vi. Last 3 yr's any major Medical Intervention

Key Milestones

#	Milestone	Activities
1	Requirement understanding	1. Understanding the patient data collected 2. Model baselining 3. Identify risks with prediction for the business
2	EDA	1. Data cleaning/massaging/imputation 2. Visualizations and document observations 3. Data preparation for model-categorical/data type corrections, etc
3	Creating model	1. Identify models to be created 2. Use training and validation data to evaluate model
4	Review model output with sponsor	1. Evaluate model using test data 2. Document results 3. Review with customer
5	Handover	1. Document model card 2. Handover

Timeline

Assumptions

✓ Package price prediction will be done only for the treatments available in the historic data with sufficient records for the model to learn
✓ Data will be provided in excel or database as per the number of records available.
✓ Sufficient historic data will be provided per treatment and per patient category so that effective predictions can be done.
✓ Price predicted will be the minimum package price for a hospital category and a patient category (based on co morbidities). Actual package price can then be decided by the consumer of the model.
✓ Model will be written in Python and handed over to the sponsor for deployment.

Out of scope

➢ Front end screens for capturing answers to the questionnaire is not considered.
➢ Integration with existing software solutions from sponsor is not considered.
➢ Full ML Ops pipeline is not considered in this scope and timeline.

Project Team

Following are the members working on this project.

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