**BUAN 6356.006 – Business Analytics with R (Group 16)**

**Project Proposal**

**Team members:**

Draksharam, Vishnu Paschyanti (vxd200023)

Jawahar Vasagam, Premi (pxj220007)

Farzana M B, Ashika (axf210029)

Tallapally, Jahnavi (jxt200051)

Parthasarathi, Prriyamvradha (pxp220005)

**Dataset:**

We are using second-hand data obtained from kaggle.com

<https://www.kaggle.com/code/namanmanchanda/heart-attack-eda-prediction-90-accuracy/data>

**Problem Statement:** To determine whether a person is at risk for heart attacks or not.

**Objective:**

* To estimate a patient's likelihood of experiencing a heart attack in the near future
* To analyze which machine learning methods can be used on this set of medical data to aid in heart attack prediction
* Determine the main factors that affect heart attacks

**Data mining technique:** Classification

**Data description:**  
The data consists of 14 columns and 303 rows, based on which the prediction can be performed:

|  |  |
| --- | --- |
| Column Name | Description |
| age | Indicates the age of the patient in years. |
| sex | Indicates the sex of the patient in a binary format (1= male, 0= female) |
| cp | Chest pain type ~  0 = Typical Angina  1 = Atypical Angina  2 = Non-anginal Pain  3 = Asymptomatic |
| trtbps | Resting blood pressure (in mm Hg on admission to the hospital) |
| chol | Cholesterol in mg/dl fetched via BMI sensor |
| fbs | (fasting blood sugar > 120 mg/dl) ~  1 = True  0 = False |
| restecg | Resting electrocardiographic results ~  0 = Normal  1 = ST-T wave normality  2 = Left ventricular hypertrophy |
| thalachh | Maximum heart rate achieved in the scale of (71 to 202) |
| oldpeak | ST depression induced by exercise relative to rest. |
| slp | The slope of the peak exercise ST segment (0 = downsloping; 1=flat; 2=upsloping) |
| caa | Number of major blood vessels(0-4) |
| thall | Thallium Stress Test result ~ (1= fixed defect; 2 = reversible defect; 3=normal) |
| exng | Exercise induced angina ~  1 = Yes  0 = No |
| output | 0=less chance of heart attack  1=more chance of heart attack |