Parul® University

Basic Details of the Team and Problem Statement

Problem Statement Title : **Customer Loyalty Prediction in Healthcare**

Team Name : **DATA RANGERS**

Team Leader Name : **HITESH**

Institute Name : **Chandigarh University**

Sub Domain Name : **MAR-2 (Customer Loyalty Prediction)**

Idea/Approach Details

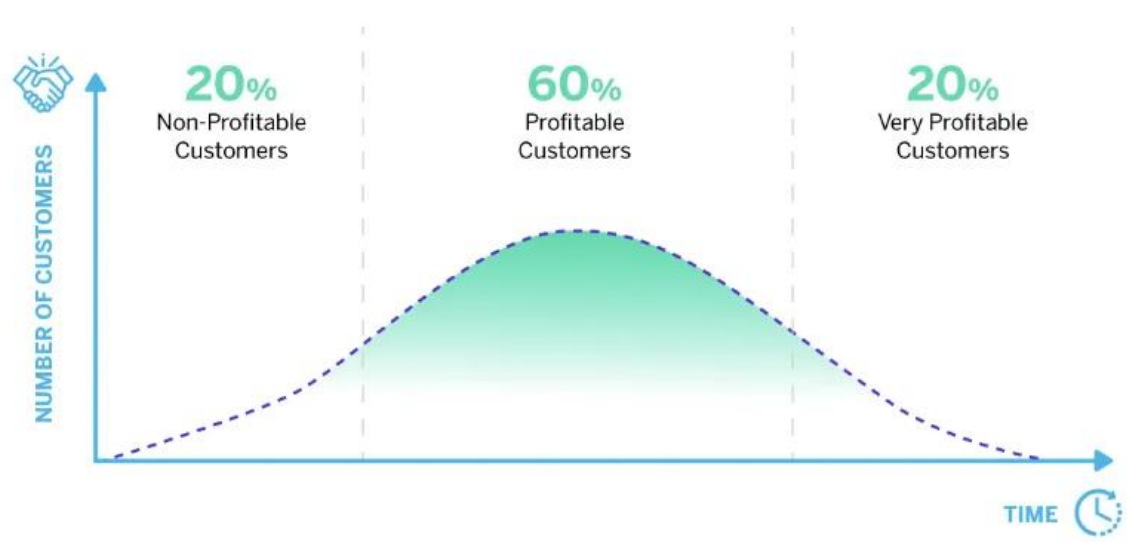
- To build an Accurate Machine Learning Model (Classifier) which can predict types of Customers (Based on Loyalty specific Features).
- To Categorize Customers based on their Lifetime value.
- To Enable Personalized Marketing efforts for less loyal Customers.
- Loyalty programs for Loyal Customers to ensure Customer Retention.

Technology Stack

- **Python Libraries:** Scikit-learn, TensorFlow, Keras, and PyTorch for building and training machine learning models.
- **Data Analysis:** Pandas, NumPy, and SciPy for data manipulation and analysis.
- **Visualization:** Matplotlib, Seaborn, and Plotly for data visualization.
- **Model Evaluation:** Scikit-learn to evaluate the model performance using metrics like Accuracy and Confusion-Matrix.
- **Feature Engineering**
- **Data Collection**

Use-Cases

- **Personalized Marketing for Less Loyal Customers**
- **Loyalty Program for Loyal Customers**
- **Identify Customers at risk of leaving and take proactive measures to retain them.**
- **Enhancing Customer Experience**
- **Resource Allocation and Management**
- **Feedback and Improvement Loops**



Dependencies/Potential Stopers

- Data Availability and Quality
- Data Privacy and Security
- Technical Infrastructure
- Machine Learning Expertise
- Feature Engineering Tools
- Resistance to Change
- Integration Challenges
- Unforeseen Regulatory Changes
- Model Performance Issues