SIMATS ENGINEERING

Saveetha Institute of Medical and Technical Sciences
Chennai- 602105

Engineer to Excel

Student Name: N.Kishan Kumar **Reg. No.:192424404**

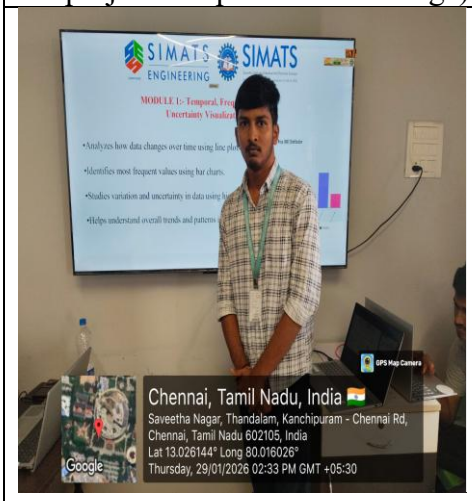
Course Code:DSA0613 **Slot:** A

Course Name: Data Handling and Visualization for Data Analytics

Course Faculty: Dr. Kumaragurubaran T, Senthilvadivu Subramanian

Project Title: Exploratory Data Analysis and Visualization of Bus Fare Data Using R Techniques

Module Photographs: (3 photographs –Module Photo, Individual student contribution module work in the project and presentation image)



Project Description: (here you write what you did in this project (contribution) including Model Description

This project is about studying bus fare data to find useful patterns and insights. I cleaned the data, explored it with statistics, and used R tools to make clear visualizations. The aim was to understand how fares change with time, routes, and passenger types, and to show results in simple graphs that anyone can read.

Module 1: Temporal, Frequency, and Uncertainty Visualization.
In this module, I focused on how fares change over time, how often certain fare ranges occur, and how to show uncertainty in data. I used line charts to show fare changes by hours, days, and months. Histograms and bar charts showed which fare ranges are most common. Boxplots and error bars helped explain variation and uncertainty in fares. I also added density plots to highlight frequent fare values and moving averages to smooth trends. These visualizations made it easy to spot peak travel times, common fare ranges, unusual patterns, and the reliability of the data.

Student Signature **Guide Signature**