**About**:

Trolley Management System application is used to predict number of trolleys to be placed in a store Trolley bay at given time and quarter of the day. This is built on R platform.

**This Folder Consists files mentioned below:**

1. Ui.r
2. Server.r
3. Read-me.docx
4. Data\_cons.csv
5. DataSetSummary.csv
6. Test.csv

**Software Requirements**:

1. R Studio software
   1. Version 0.99.903
2. Operating System
   1. Windows XP, Windows 7, Windows 8, Windows 10
   2. Mac OSX (Any version)
3. Web browser (Optional)
   1. Mozilla
   2. Google Chrome
   3. Opera
   4. Internet Explorer 9 and Above.
   5. Safari

**Steps**:

1. Install R Studio Application
   1. Link to download R Studio Application for free is: https://www.rstudio.com/products/rstudio/download/
2. Click on File -> Open File
3. Select Files from TrolleyMgmt folder-
   1. Ui.r
   2. Server.r
   3. In server.r file, check for location of the Input File.
4. Click on button ‘Run App’ on TOP-CENTER-RIGHT of the software
   1. If the application does not start and request to install libraries, click on Packages on RIGHT-MIDDLE of R application -> Click on Install and in Packages Input Field Enter

“shiny,shinythemes, e1071, ggplot2, GGally, dplyr ,tree, rpart, rpart.plot ,lubridate” and click on Install.

* 1. (Please click on Restart R application if Prompted with message ‘Restart R and Install’)

1. R studio application request user to save file before executing
2. Click on Save All button on the pop up window panel.
3. Trolley Management System Loads on a new window
4. Select **company name** from the available drop down on TOP – LEFT of newly opened window. (This drop down menu has a label called **Company Name**.)
5. Select a value for **store name** from drop down below Company Name. (This drop down menu has a label called **Store Name)**
6. Select a value for **Bay Name** from the drop down menu below store name. (This drop down menu has a label called **Bay Name**)
7. Select a value for **Quarter of the Day** from the drop down menu below **Bay Name.** (This drop down menu has a label called **Quarter of the Day**)
8. Select a value for **Date for Prediction** from the drop down menu under Quarter of the day. (This drop down menu has a label called Date for **Prediction**)
9. Click on **Start Engine** button which is in Orange color.
10. Look on the CENTER- RIGHT part of the screen to get the output from Machine Learning Algorithm.
11. There are two tabs available to the end user
    1. **Knowledge Tab**: This tab provides user with 4 values.
       1. **Maximum Capacity** of the bay selected in Step 10.
       2. **Recommended Bay** Stock is the value to be present at Bay selected step 10(This also considers user input selected store in step 9, selected quarter of the day in step 11 and date for prediction in step 12).
       3. **Recommended Percentage Stock** is the percentage value for the number procured in the previous step. This calculates percentage by dividing Recommended Bay stock by Maximum Capacity of respective bay and multiply by 100.
       4. A note for user to understand meaning of each value obtained is provided below Recommended Percentage Stock value.
       5. **Stock Available in Each Bay** provides user with information of trolleys available in other bays including the selected bay for which prediction is obtained.
    2. **Summary Tab: -** This tab provides user with a bar graph. This graph denotes a bar for each bay in respective company selected. Bars are grouped into respective store by having a label of ‘store name’ below it. This data is plotted against number of trolleys available in each bay. Highest point on the bar represents maximum number of trolleys available in that bay in the respective store for a given company.
12. Select drop down from “**Select theme:”** window to change theme of the software according to your choice. There are 17 choices available to the user. This window is located in TOP-RIGHT of the application window.
13. Close the window to exit the application.