# **Table of Contents**

* [Summary](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id1) of Last Session
* [Problem Description](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id1)
* [Importing Libraries and Data](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id2)
  + [Importing Libraries](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id2a)
  + [Importing Data](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id2b)
  + [Data Dictionary](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id2c)
* [Preprocessing Data](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id3)
  + [Basic Data Checks](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id3a)
  + [Renaming Columns](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id3b)
  + [Processing Zipcodes](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id3c)
  + [Fixing data types](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id3d)
  + [Processing Experience](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id3e)
* [Exploratory Data Analysis](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4)
  + [EDA | 5 Point Summary](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4a)
  + [Bivariate and Multivariate Analysis](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4b)
  + [EDA | Univariate Analysis - Continuous Variables](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4c)
  + [EDA | Univariate Analysis - Categorical Variables](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4d)
  + [EDA | Bivariate & Multivariate Analysis](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4e)
  + [EDA | Checking Imbalance in Target Column](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4f)
  + [EDA | Insights Summary](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id4g)
* [Feature Engineering](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id5)
  + [Feature Engineering | Dropping Unnecessary or duplicate features](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id5a)
  + [Feature Engineering | Creating dummies](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id5b)
  + [Feature Engineering | Train Test Split](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id5c)
  + [Feature Engineering | Feature Scaling using Standardisation](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id5d)
* [Logistic Regression](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6)
  + [Choosing best Performance Metric](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6a)
  + [Defining Functions](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6b)
  + [Model 1 - Logistic Regression with Sklearn library](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6c)
  + [Model 2 - Logistic Regression with Statmodel library](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6d)
  + [Model 3 - Logistic Regression with Feature Selection ( P-Value based)](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6e)
  + [Model 4 - Logistic Regression with Optimized threshold value](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6f)
  + [Further Analysis - ROC Curve & Coefficients Inerpretations](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id6g)
* [Summary & Recommendations](http://localhost:8888/notebooks/Week14_Day4_notebook.ipynb#id7)







































































































































































































































