

# STA 380 Exercises Documentation – Readme File

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This repository contains exercises for the STA 380 course. The main exercises are structured within the Jupyter Notebook named "STA 380 Part 2 Exercises". The detailed breakdown of these exercises, along with other supplementary exercises contained in separate folders, is given below.

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## Main Jupyter Notebook Exercises

The "STA 380 Part 2 Exercises" Jupyter notebook encompasses the following exercises:

- Probability Practice
- Wrangling the Billboard Top 100
- Visual Story Telling Part 1
- Visual Story Telling Part 2
- Clustering and Dimensionality Reduction
- Market Segmentation
- Reuters C50

## Association Rule Mining Exercise Folder

Contained within the "Association Rule Mining exercise" folder, this includes:

- groceries.csv: The dataset used for this exercise.
- grocery\_association\_rule\_mining.Rmd: R script detailing the process and analysis of the exercise.
- grocery\_association\_rule\_mining.pdf: A report documenting the results and findings.

## Image Classification with Neural Networks Folder

Due to the lengthy processing time required for this exercise, it's separated from the main notebook. The folder consists of:

- CNN - Jupyter Notebook: The Python code written in a Jupyter Notebook format.
- CNN - Jupyter Notebook.pdf: A comprehensive report that presents the results and analysis.

Note: The separation of this exercise is intentional, as the computational time to run and process the data is quite extensive.