Apriori Algorithm in Python

**This tutorial will walk you through a basic analysis of transactional data from various stores**

**Requirements:**

Mac OS

Python

**Setup:**

Ideally, you will download the Apriori folder

In your terminal, locate the directory of the folder within which the Apriori folder is contained. This folder will contain two .py files: “GenerateTransactions.py” and “AprioriFinal.py”

Type “Python” and enter to check and make sure you have python installed on your system.

Now, type in the following commands to ensure you have permissions to run the files: chmod +x “file path.py”

A screen shot of a computer

Description automatically generated

Now, drag and drop the “Generate Transactions” file and run it. This will generate 5 csv files that will be used for the analysis. These files will be located in the same folder as the .Py files. The data sets used for this example are included in the folder.

Now run the Apriori.Py file.

A black screen with white text

Description automatically generatedYou will be prompted to select a store, input a minimum support value (0-1), and input a minimum confidence value (0-1). You will then receive a breakdown of the frequent item sets and association rules.

**Sample Outputs for 5 stores:**

A screenshot of a menu

Description automatically generatedStore 1:

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A screenshot of a screen shot of a table

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Store 2:

A computer screen shot of a black screen

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A screenshot of a menu

Description automatically generatedStore 3:

A computer screen with white text

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A screenshot of a list of soaps

Description automatically generatedStore 4:

A computer screen shot of white text

Description automatically generated

A table with black text

Description automatically generated with medium confidenceStore 5:

A computer screen with white text

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**Code:**

GenerateTransactions.py:

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Apriori.py:

A screen shot of a computer program

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A screenshot of a computer code

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A screenshot of a computer program

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Chief Limitation: The primary limitation is the data. The datasets were small and did not contain enough items per transaction relative to the total # of possible items in order to produce more interesting results. Next time, the transaction generator.py file can be updated to improve this.