

Import library

```
!pip install pyECLAT
import pandas as pd

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting pyECLAT
  Downloading pyECLAT-1.0.2-py3-none-any.whl (6.3 kB)
Requirement already satisfied: numpy>=1.17.4 in /usr/local/lib/python3.9/dist-packages (from pyECLAT) (1.22.4)
Requirement already satisfied: tqdm>=4.41.1 in /usr/local/lib/python3.9/dist-packages (from pyECLAT) (4.65.0)
Requirement already satisfied: pandas>=0.25.3 in /usr/local/lib/python3.9/dist-packages (from pyECLAT) (1.5.3)
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.9/dist-packages (from pandas>=0.25.3->pyECLAT) (2022.7.1)
Requirement already satisfied: python-dateutil>=2.8.1 in /usr/local/lib/python3.9/dist-packages (from pandas>=0.25.3->pyECLAT) (2.8.2)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.9/dist-packages (from python-dateutil>=2.8.1->pandas>=0.25.3->pyECLAT) (1.16.0)
Installing collected packages: pyECLAT
Successfully installed pyECLAT-1.0.2
```

Load Dataset from Local Directory

```
from google.colab import files
uploaded = files.upload()

Choose Files Market_Ba...imisation.csv
• Market_Basket_Optimisation.csv(text/csv) - 302908 bytes, last modified: 4/15/2023 - 100% done
Saving Market_Basket_Optimisation.csv to Market_Basket_Optimisation.csv
```

Importing the dataset

```
dataset = pd.read_csv('Market_Basket_Optimisation.csv', header=None)
print(dataset.shape)
print(dataset.head(5))
```

```
(7501, 20)
```

0	1	2	3	4	\
0	shrimp	almonds	avocado	vegetables mix	green grapes
1	burgers	meatballs	eggs	NaN	NaN
2	chutney	NaN	NaN	NaN	NaN
3	turkey	avocado	NaN	NaN	NaN
4	mineral water	milk	energy bar	whole wheat rice	green tea

  

0	5	6	7	8	9	\
0	whole weat flour	yams	cottage cheese	energy drink	tomato juice	
1	NaN	NaN	NaN	NaN	NaN	
2	NaN	NaN	NaN	NaN	NaN	
3	NaN	NaN	NaN	NaN	NaN	
4	NaN	NaN	NaN	NaN	NaN	

  

0	10	11	12	13	14	15	\
0	low fat yogurt	green tea	honey	salad	mineral water	salmon	
1	NaN	NaN	NaN	NaN	NaN	NaN	
2	NaN	NaN	NaN	NaN	NaN	NaN	
3	NaN	NaN	NaN	NaN	NaN	NaN	
4	NaN	NaN	NaN	NaN	NaN	NaN	

  

0	16	17	18	19
0	antioxydant juice	frozen smoothie	spinach	olive oil
1	NaN	NaN	NaN	NaN
2	NaN	NaN	NaN	NaN
3	NaN	NaN	NaN	NaN
4	NaN	NaN	NaN	NaN

Training APRIORI

```
from pyECLAT import ECLAT
eclat_instance = ECLAT(data = dataset, verbose = True) #verbose = True to see the loading bar
```

```
100%|██████████| 120/120 [00:01<00:00, 72.44it/s]
100%|██████████| 120/120 [00:00<00:00, 2778.13it/s]
100%|██████████| 120/120 [00:00<00:00, 2091.92it/s]
```

Results

```
result = eclat_instance.support(min_support=None)
result
```

```
{'water spray': 0.0003999466737768298,
'herb & pepper': 0.04946007199040128,
'gluten free bar': 0.006932409012131715,
'gums': 0.013464871350486601,
'shrimp': 0.07145713904812692,
'milk': 0.12958272230369283,
'rice': 0.018797493667511,
'honey': 0.047460338621517134,
'meatballs': 0.020930542594320756,
'cottage cheese': 0.03186241834422077,
'french fries': 0.1709105452606319,
'burgers': 0.0871883748833489,
'bramble': 0.0018664178109585388,
'bacon': 0.008665511265164644,
'avocado': 0.03332888948140248,
'grated cheese': 0.0523930142647647,
'burger sauce': 0.005865884548726837,
'tomato sauce': 0.014131449140114652,
'fresh tuna': 0.022263698173576856,
'pasta': 0.01573123583522197,
'spinach': 0.007065724570057326,
'cereals': 0.025729902679642713,
'shallot': 0.007732302359685375,
'tea': 0.0038661511798426876,
'frozen vegetables': 0.09532062391681109,
'mayonnaise': 0.0061325156645780565,
'french wine': 0.022530329289428077,
'butter': 0.030129316091187842,
'energy drink': 0.026663111585121985,
'chicken': 0.05999200106652446,
'whole wheat rice': 0.058525529929342755,
'flax seed': 0.009065457938941474,
'green grapes': 0.009065457938941474,
'white wine': 0.01653112918277563,
'escalope': 0.0793227569657379,
'whole wheat pasta': 0.029462738301559793,
'tomatoes': 0.06839088121583789,
'extra dark chocolate': 0.011998400213304892,
'ground beef': 0.09825356619117451,
'zucchini': 0.009465404612718305,
'muffins': 0.024130115984535395,
'champagne': 0.04679376083188908,
'salmon': 0.04252766297826956,
'magazines': 0.010931875749900012,
'antioxydant juice': 0.008932142381015865,
'brownies': 0.03372883615517931,
'pet food': 0.006532462338354886,
'barbecue sauce': 0.010798560191974404,
'light cream': 0.01559792027729636,
'salad': 0.004932675643247567,
'eggplant': 0.013198240234635382,
'yogurt cake': 0.027329689374750034,
'oil': 0.023063591521130515,
'pickles': 0.005999200106652446,
'salt': 0.009198773496867084,
'chili': 0.0061325156645780565,
'cream': 0.0009332089054792694,
'red wine': 0.028129582722303693,
```