

# Retail with Market Basket Analysis

Executive Report

Caio di Felice Cunha

## Market Basket Analysis

I would like to present the result of the Market Basket Analysis, which brought many insights into areas such as sales, marketing and storage.

## Conclusion

For this business, we have seen that products such as "Dust-Off Compressed Gas 2 pack", "HP 61 ink" and "VIVO Dual LCD Monitor Desk mount" are the most sought after products after the first purchases, therefore, it is important to ensure that you always have these products in stock, as well as leave them as a recommendation to the customer.

For more details about the products, in Datasets file there are 03 files specifying them (df\_product1, df\_product2, df\_product3).

## How we got to the result

Below is a brief description of how we arrived at the result.

If you want to analyze more details, see the [full Report](#).

## 1 – Properly Selecting Columns

Now we have our first difficult decision. We will only take the columns that have both Item01 and Item02 filled in, as our intention is to understand the Market Basket, therefore, if there is only 1 product, the analysis will be very difficult to give any productive result.

## 2 - Preparing the dataset

The second difficult decision is to define which column of products to work with. Decided on the first 06 columns.

Note: The LHS stands for antecedent while rhs stands for consequent.

### 3 - Change the metrics to make the model better

Top 3 rules

lhs	rhs	support	confidence	coverage	lift count
{Screen Mom Screen Cleaner kit, VIVO Dual LCD Monitor Desk mount}  => {Dust-Off Compressed Gas 2 pack}	0.2991453	1	0.2991453	1.746.269	35
{Apple Lightning to Digital AV Adapter, SAMSUNG EVO 32GB card}  => {HP 61 ink}	0.2478632	0.8787879	0.2820513	1.869.421	29
{Dust-Off Compressed Gas 2 pack, SanDisk Ultra 64GB card}  => {VIVO Dual LCD Monitor Desk mount}	0.2307692	0.9642857	0.2393162	2.128.706	27

End