**Market Basket Analysis Visualizations**



Fig 1.1 showing the Relative item Frequency



Fig 1.2 showing the Absolute item Frequency

The summary of the data that is taken into consideration with APRIORI algorithm:

* Parameter Specification: Support = 0.012 and confidence= 0.05 values with 10 items as max of items in a rule
* Total Number of Rules: set of 419 rules
* The 5 most frequently bought items with their count:

|  |  |
| --- | --- |
| Item | Percentage |
| iMac | 25 |
| HP Laptop | 19 |
| Cyberpower Gamer Desktop | 18 |
| Apple EarPods | 17 |
| Apple MacBook Air | 15 |

Table 1.1 showing the top five most frequently bought items with their percentage.

**Overview of Rule’s metrics**

|  |  |  |  |
| --- | --- | --- | --- |
| LHS |  | RHS | COUNT |
| Dell Desktop, Hp Laptop | => | ViewSonic Monitor | 150 |
| ViewSonic Monitor | => | ASUS Chromebook | 172 |
| ASUS Chromebook | => | ViewSonic Monitor | 172 |
| Acer Desktop, HP Laptop | => | Dell Desktop | 122 |
| Dell Desktop, ViewSonic Monitor | => | HP Laptop | 150 |

Table 1.2 showing the overview of Association Rules

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Fig 1.3 showing the Grouped Matrix

The probability of buying iMac and HP Laptop with other accessories are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| LHS |  | RHS | COUNT |
| iMac | => | Logitech Keyboard | 105 |
| iMac | => | Logitech MK550 Wireless Keyboard | 99 |
| iMac | => | HDMI cable 6ft | 114 |
| iMac | => | Panasonic In-Ear Headphone | 113 |
| iMac | => | Etekcity Power Extension Cord Cable | 106 |

Table 1.3: The probality of buying iMac with other accessories



Fig 1.4 Graph showing the association rules for iMac and other products

|  |  |  |  |
| --- | --- | --- | --- |
| LHS |  | RHS | COUNT |
| HP Laptop | => | Otium Wirelss Sports Bluetooth Headphone | 99 |
| HP Laptop | => | Alienware Laptop | 102 |
| HP Laptop | => | Etekcity Power Extension Cord Cable | 102 |
| HP Laptop | => | Dell 2 Desktop | 106 |
| HP Laptop | => | Slim Wireless Mouse | 142 |

Table 1.4: The probality of buying iMac with other accessories



Fig 1.5 Graph showing the association rules for HP Laptop and other products