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**C3T4 Report**

1. After getting to know your dataset, do you have any insights or observations? Take notes on any thoughts that you have to use later in your report.
   1. There are 9,835 observations.
   2. There are 125 unique items within the list.
   3. The longest transaction included 32 items.
   4. The data is relatively clean with no data integrity concerns (outside of a few ‘blank’ cells here and there).
2. After plotting your visualizations, do you notice any patterns? Or have any observations? Take notes on your insights and observations, which might be useful to include in your formal report.
   1. iMac (2,524) & HP Laptops (1,913) are purchased most frequently.
      1. iMac falls within the Desktop category
      2. HP Laptop falls in the Laptop category
   2. The following items are purchased most frequently on their own.
      1. Apple MacBook Air – 380
      2. Apple EarPods - 156
      3. iMac – 121
3. Observations after evaluating the best rules:
   1. Highest Confidence: (106 count)
      1. {Acer Aspire, ViewSonic Monitor} => {HP Laptop}
         * **Sup**: 1.1%. **Conf**: 60% **Lift**: 3.102856
   2. Highest Support: (537 count)
      1. {Dell Desktop} => {iMac}
         * **Sup**: 5% **Conf**: 41% **Lift**: 1.590762
   3. Highest Lift: (106 count)
      1. {Acer Aspire, ViewSonic Monitor} => {HP Laptop}
         * **Sup**: 1.1%. **Conf**: 60% **Lift**: 3.102856

Overall, iMac’s are the number one sold item with 2,524 units sold in the last 30 days. Following iMac’s, HP Laptops are the second most sold item with 1,913 purchased.

Interestingly, iMacs are the 3rd most popular items to be sold on their own. Some may suggest this is because iMac’s include a keyboard, mouse, monitor and additional accessories are not required.

In the rules above I noticed they have a unique mix of items that seem conflicting.

The iMac is a desktop but it purchased with Dell Desktops.

Similarly, Acer Aspire laptops are often purchased with HP Laptops. Since *most* people don’t need two different types of laptops and two different types of desktops, it makes me wonder what kind of company Electronidex is.

1. Are there any interesting patterns or item relationships within Electronidex's transactions?

The top 20 purchased products fell into the following categories:

* + - * + Laptop: 5
        + Desktop: 5
        + Monitor: 3
        + Keyboard: 3
        + Mouse & Keyboard Combo: 1
        + Computer Mice: 1
        + Active Headphones: 1
        + Accessories: 1

From our last analysis, we know Blackwell struggles to sell PC and Laptop computers. It might be beneficial to acquire Electronidex to increase the number of computer sales.

Additionally, looking at Electronidex’s most sold items, 3 of the 5 are Apple products (iMac, EarPods & MacBook Air). Those 3 items happen to be the top 3 items purchased individually. If Blackwell acquires Electronidex’s they might consider cross-selling items. For example, “buy 1 iMac and get a second item X% off”. This would encourage customers to increase their spending by purchasing more items.