The Last Dance: Legitimizing Event-Driven Analysis of the Air Jordan Sneaker Secondary Market

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Motivation

Figure 1: Jordan 1 Retro High Dior

- Investing in the secondary market of basketball sneakers has become increasingly more profitable and popular.
- Event-driven investing can exploit pricing inefficiencies that occur before a major market event and increase profit potential on the secondary market.
- While event-driven investing is not as commonly used by large investors, the sneaker market is well-segmented, smaller, and slower moving than most other markets and signals greater potential to pursue such a strategy.
- There exist tools to analyze market trends, but tools that analyze market trends based on events are less common.

	model_number	canonical_name	colorway	silhouette	gender	release_date
0	Air Jordan Three	Tinker Black Cement Gold	Black/Cement Grey-Metallic Gold	Jordan 3 Retro	men	2019-07-27
1	Air Jordan One	Royal Toe	Black/White-Game Royal-Black	Jordan 1 Retro High	men	2020-05-09
2	Air Jordan Six	Hare (GS)	Neutral Grey/White-True Red-Black	Jordan 6 Retro	child	2020-06-17
3	Air Jordan Thirty-One	Chicago	University Red/Black-White	Jordan XXX1	men	2016-11-05
4	Air Jordan Thirty-Four	Bayou Boys	Brown Kelp/Bright Crimson	Jordan XXXIV	men	2020-11-30

Figure 2: Example of partial user selectable data

Related Work

- Through a competition at StockX, a major stock-market style website for sneaker resale, the best time to resell a sneaker was analyzed. Based on market activity, it looked at state, weeks from release, and percent resale premium.

- There exists a tool, C-TREND, that looks at temporal cluster graphs to identify trends in multiattribute transactional data.

Long-Term Goals

- Generalize tool to work with all types of event driven data. This would include allowing arbitrary date selection as well as .csv file importing of data.

Resale Price Analysis

There are two visuals produced by our tool. Figure 3 shows the average resale price over time with a seven day rolling average. It also highlights the time when
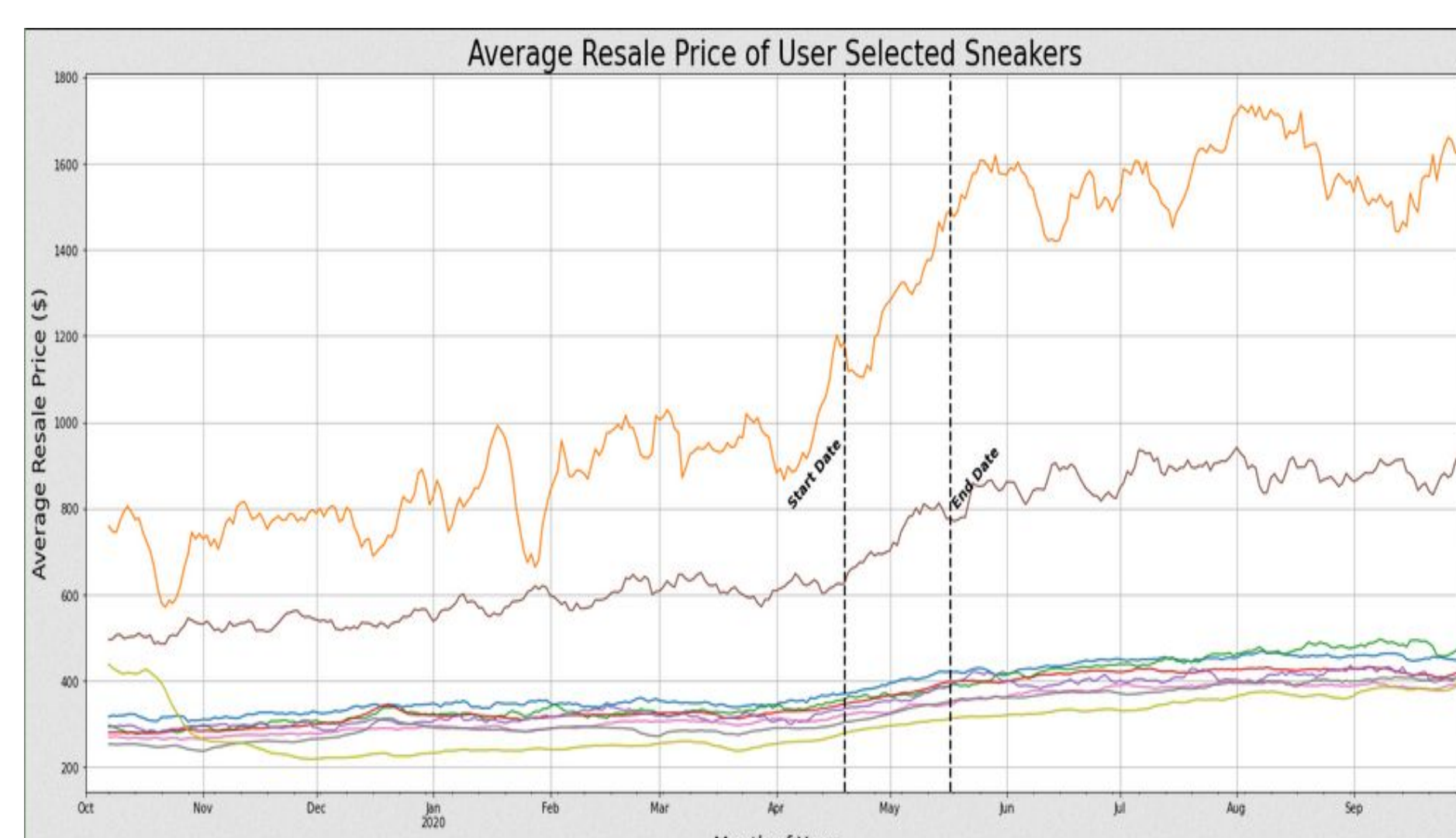

Figure 3: Average Resale Price of Air Jordans over time with a seven day rolling average

Figure 4: Key of Jordan Sneakers for Figure 3

the the documentary, "The Last Dance", aired. From this graph, it can be seen that there was a price increase during the time of the documentary, supporting the idea of event-driven investment.

Figure 5 shows a box and whisker plot over a binned monthly time series for a particular sneaker. These plots are very useful in the trading industry because they give a broader picture of what is happening in the secondary market. Besides the average resale price, one can also see the maximum and range of resale prices, which can help investors receive maximum profits.

Development

This tool was created using Google Collab. This method was chosen because it is a development platform that easily handles multiperson, simultaneous development.

Figure 3 and Figure 5 were created using Python's matplotlib library. To create them, the user first selects their data of interest by making search requests to StockX's public API and selecting shoes from the result.

Once the data has been accumulated, the user can choose to further process it. They have the option to bin the data either by month or by week. This binning allows for smoother graphs for average resale price over time.

Next, the user can select the date range for which they would like the data to be displayed. This allows users to analyze the data only during the period of the documentary, or consider trends in the data before and after the documentary.

Finally, the user can choose to use a rolling average. The rolling average can be chosen for one up to thirty days and is used to further smooth the curve.

After the data has been processed, the visuals are created. The type of plot as shown in Figure 3 is generated, displaying a line for each shoe selected by the user. Then one plot as shown in Figure 5 is created for each shoe in the data.
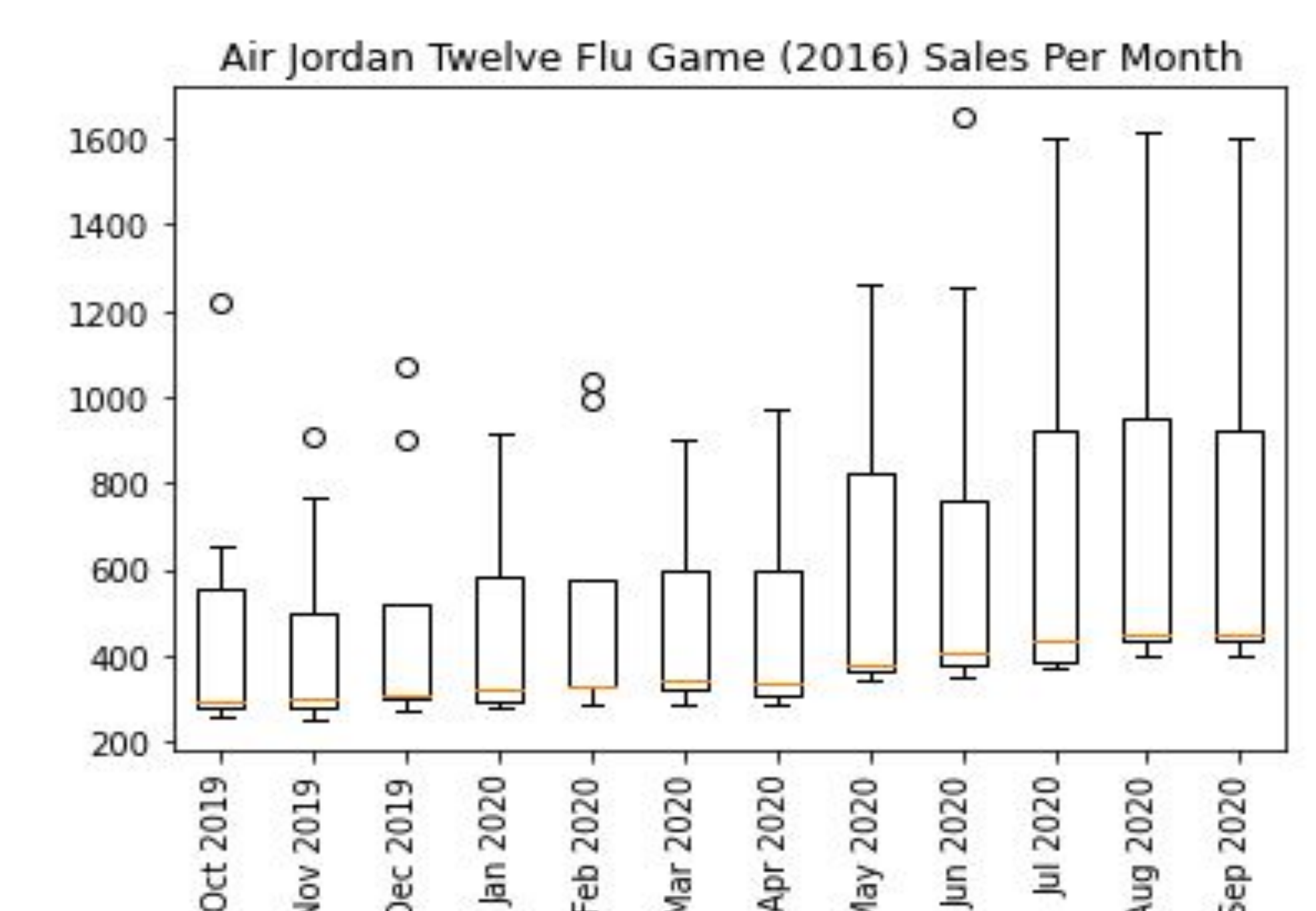

Figure 5: Binned box and whisker plot of Air Jordan 12 per month