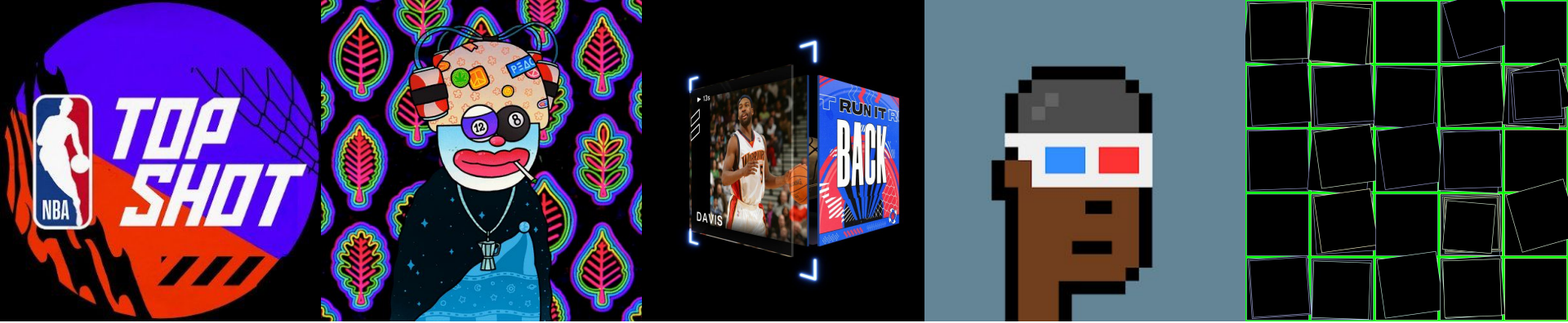

NFT Collection Monitor

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Motivation & Summary

Core message: Digital assets in general, and NFT's specifically, are at the leading edge of investing, speculation, collection and trading. Data analysis tools for this space are not widely available and the ones that are available, lack accuracy in valuations.

Questions: How can we find and analyze the relevant data? What trends will emerge? What metrics are important when determining value?

Summary: Our efforts were successful for this phase of the project. We found a static data set and wrote a program to automate the cleaning of the data and easy to use methods to run data analyses, which we display in visualizations. Notably, we found that collectors who target low serial numbers will have the largest delta between the standard "floor valuation" and actual value. We believe as the industry continues to grow, "floor valuation" models will need to be upgraded with more refined and robust options.

Questions & Data

To answer our questions, we needed a large data set with typical transactional data. We found a website that provided .csv files for a particular NFT project called NBA TopShot.

While there are APIs out there, free versions were extremely limited, or were more difficult to code up to without the use of other languages such as Solidity and Cadence.

Data Cleanup & Exploration

We used simple commands learned from class to clean up the .csv files

- Sorting
- Groupby
- Datetime adjustments
- Filtering

Data Analysis

We analyzed the data with hvplot tools:

- Bar charts for counts and current best prices by player
- Heatmap for correlation between Serial Number and Price
- Line charts for historical purchase prices and market cap

We used panel to bring it all together and organize.

Discussion

Generally speaking we found what we expected to find for this phase of the project. The most interesting chart for discussion was the scatter plot. While every moment is exactly the same for each given set, serial number plays a significant part in the perceived value. Lower serial numbers are worth substantially more than higher serial numbers (at least in NBA TopShot). There is exponential decay as you increase serial numbers.

We will be testing this further on other TopShot sets with a larger sample size. We believe the market would benefit from some sort of benchmark curve to properly value collector portfolios.

Postmortem

Difficulties:

- Not familiar with APIs for blockchain data. In this case, we would have wanted the FLOW blockchain, but need to know Cadence to properly connect.
- OpenSeaAPI does work, but only provides a max of 50 collectibles at a time, which was not enough to create meaningful analyses.

Additional Questions:

- Would want to run additional analysis on jersey numbers and palindromes for serials. Would also want to analyze other traits, such as badges, and their influence on price.

Q & A