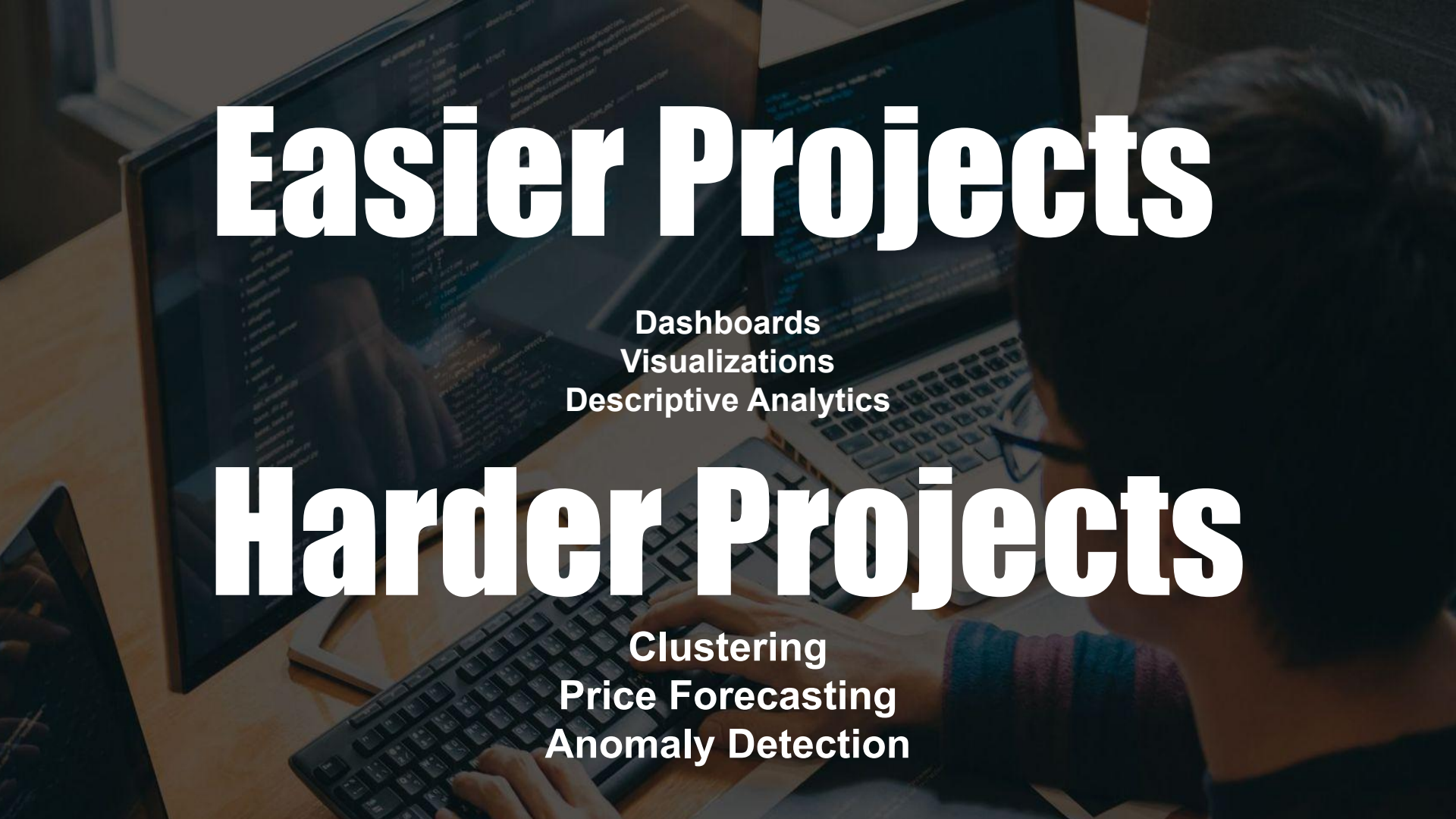
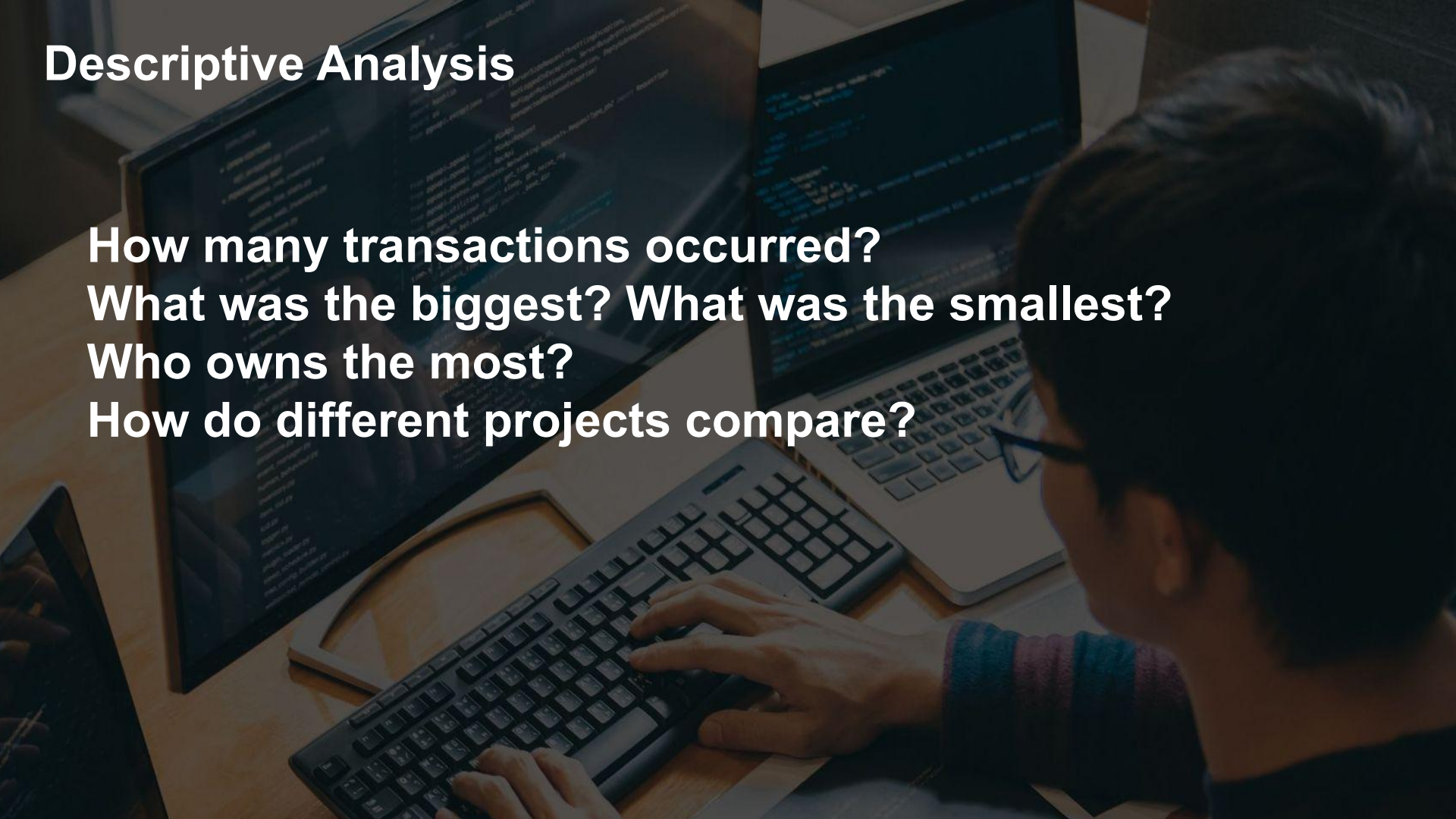
NFT ANALYTICS HACKATHON


USE CASES
Potential Problems To Solve…


Easier Projects
Dashboards
Visualizations
Descriptive Analytics
Harder Projects
Clustering
Price Forecasting
Anomaly Detection

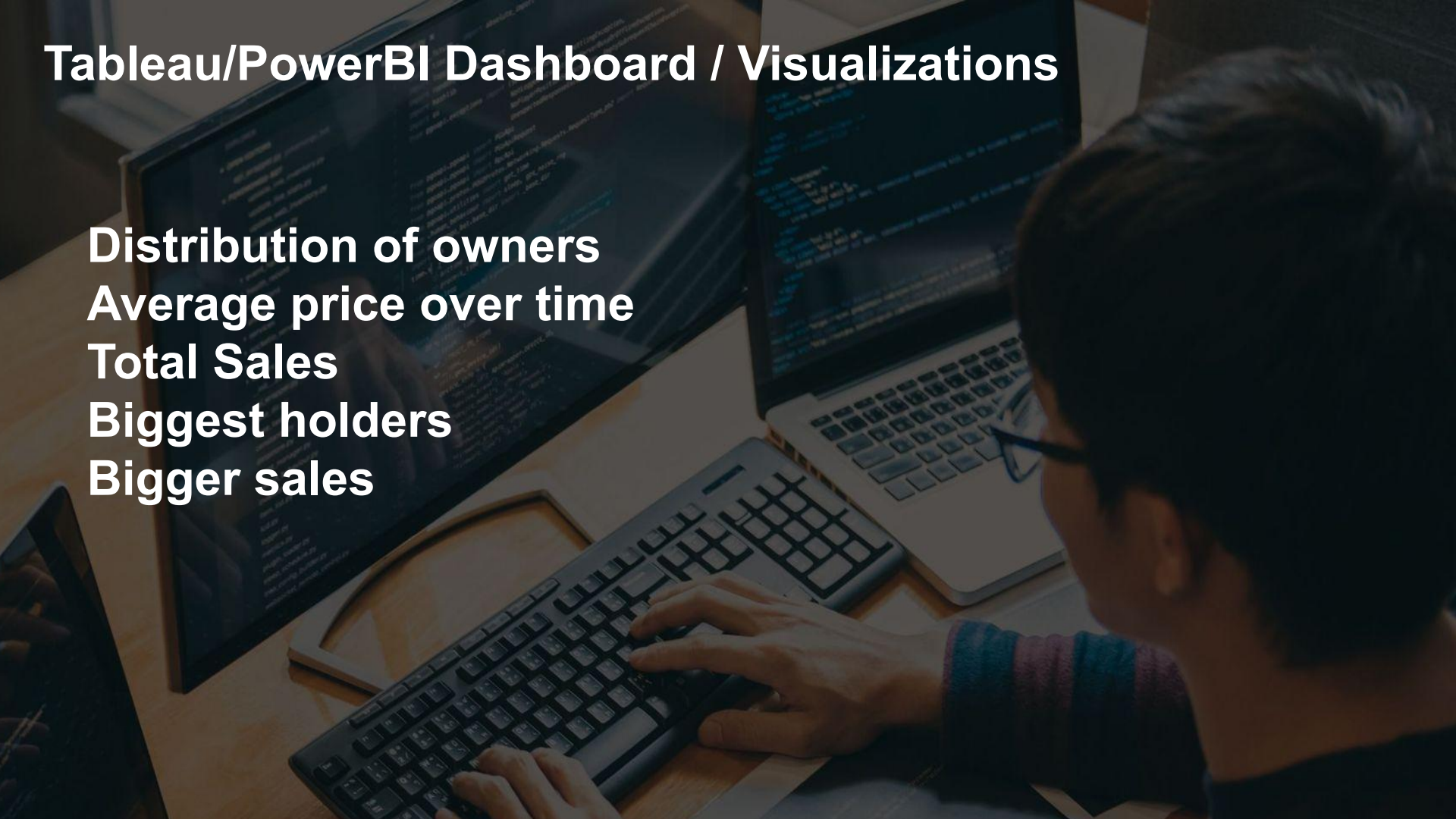

From Easiest
To Hardest

Descriptive Analysis



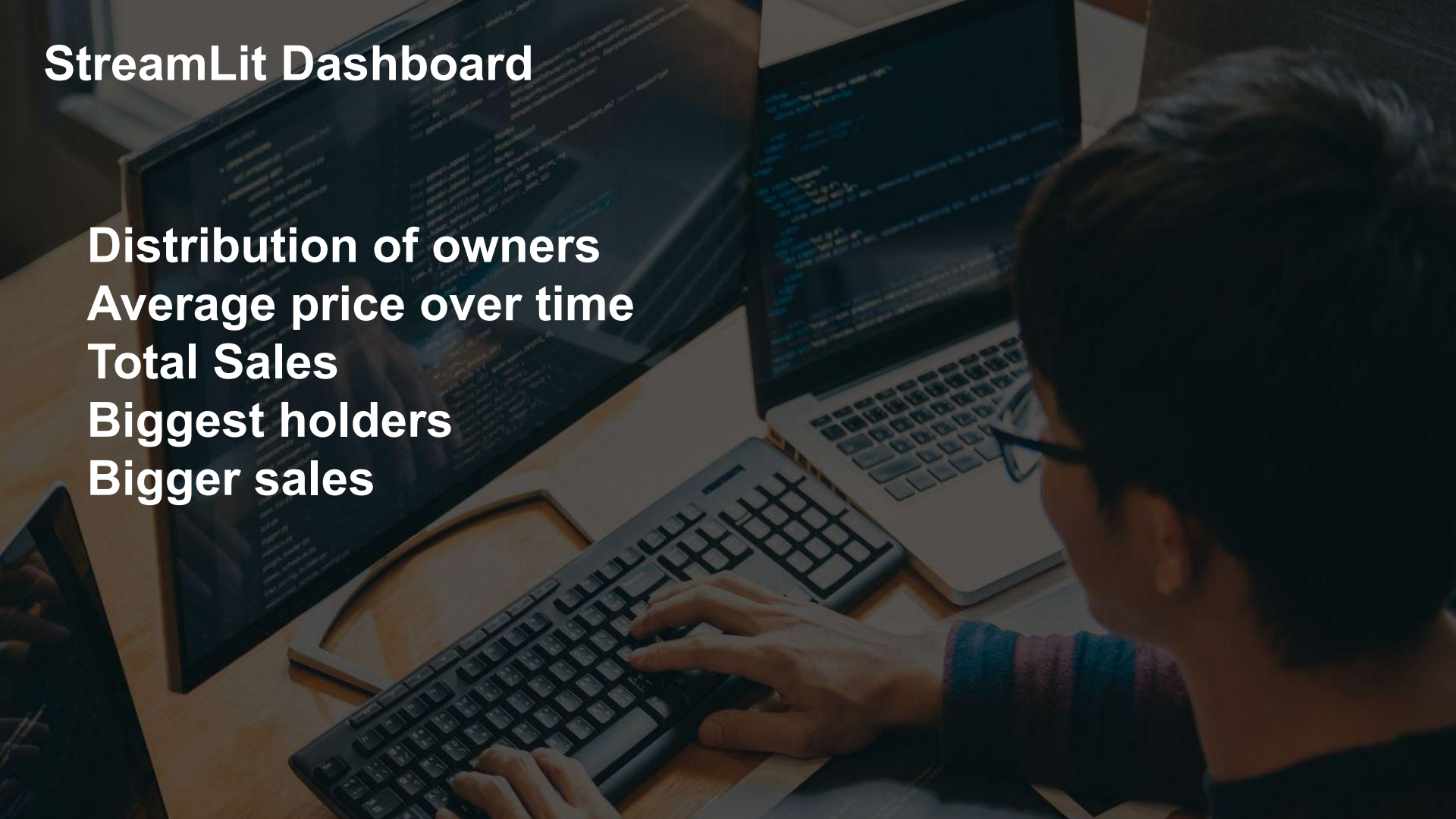
How many transactions occurred?
What was the biggest? What was the smallest?
Who owns the most?
How do different projects compare?

Tableau/PowerBI Dashboard / Visualizations



Distribution of owners
Average price over time
Total Sales
Biggest holders
Bigger sales

StreamLit Dashboard



Distribution of owners
Average price over time
Total Sales
Biggest holders
Bigger sales

MetaStreet Labs Collateral Value Calculator

Click Here For Data + Use Case

Senior Data Scientist / Engineer

Thank you for applying to MetaStreet Labs! MetaStreet is a DeFi (Decentralized Finance) interest rate protocol that provides liquidity to NFT (non-fungible token) collateral via tranched capital pools, abstracting risk and yield away from individual NFTs. MetaStreet seeks to utilize financial constructs to scale the GDP of the Metaverse and emerging NFT economies.

Given the volume of applications we've received for this role, we are asking applicants to do a *quick* case study demonstrating your skills. Please do not spend more than a couple of hours on this exercise.

Use the attached dataset to build an an automatic "collateral value" calculator, according to the formulation below. Python, JavaScript, or any other programming language you think is best suited for this task is acceptable. The calculator should be toggleable by date, and output both ETH and USD prices.

3.3.1 Collateral Value

The collateral value (CV) is a time series that estimates the collateral's floor price. It is computed from a moving average of the transacted floor price over the last 30 days, with first quartile extremes filtered out.

$$\text{CV}[n] = \frac{\sum_{i=0}^{30} \text{Transacted Floor Price}[n-i] \times \text{Transaction Count}[n-i]}{\sum_{i=0}^{30} \text{Transaction Count}[n-i]}$$

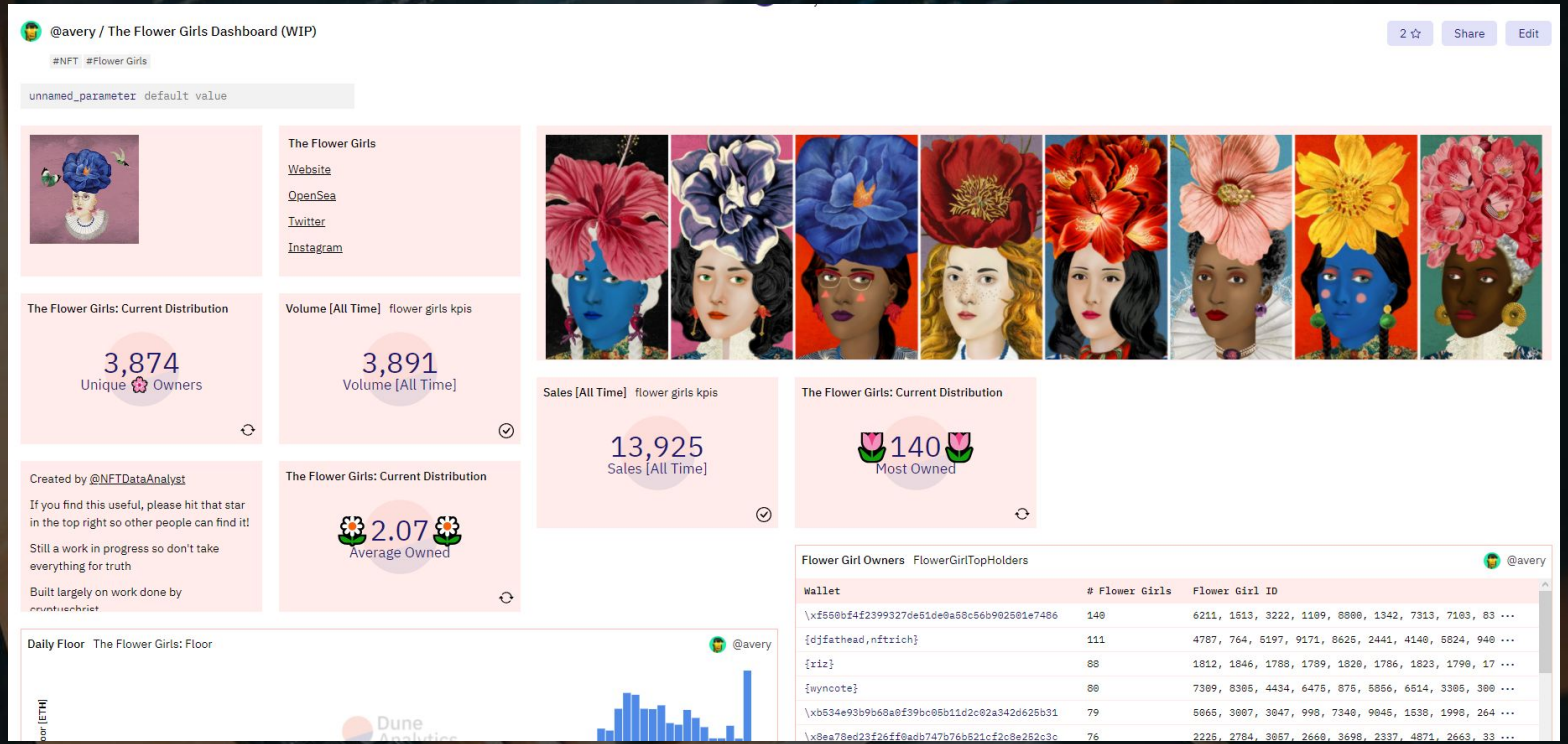
where

$$\begin{aligned}
\text{Filtered Transaction Prices}[n] &= \{p \in \text{Daily Transaction Prices}[n] \mid p > 0.15 \times Q_1(\text{Daily Transaction Prices}[n])\} \\
\text{Transacted Floor Price}[n] &= \min(\text{Filtered Transaction Prices}[n]) \\
\text{Transacted Count}[n] &= \text{count}(\text{Filtered Transaction Prices}[n])
\end{aligned}$$

cryptopunks_01-14-2022_13-55-22_downloaded.csv 3814.8KB

Dune Dashboard

[Click to see link]



Forecast a Project's Future Price

Use a time series to predict future prices of NFT's