

# NFT



# ANALYTICS

# HACKATHON



A person with dark hair and glasses is seen from the side, sitting at a desk and typing on a keyboard. They are wearing a dark sweater with a colorful striped cuff. In front of them are two large computer monitors displaying lines of code in a dark-themed editor. The scene is dimly lit, with the primary light source being the screens. The overall mood is focused and professional.

# USE CASES

Potential Problems To Solve...

A person is seen from behind, sitting at a desk and working on a laptop. There are multiple computer monitors in the background, some displaying code and others displaying data visualizations. The scene is dimly lit, with the primary light source being the screens. The text is overlaid on this background.

# Easier Projects

Dashboards  
Visualizations  
Descriptive Analytics

# Harder Projects

Clustering  
Price Forecasting  
Anomaly Detection

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# From Easiest To Hardest



# Descriptive Analysis

A person with dark hair and glasses is seen from the side, sitting at a desk and typing on a keyboard. There are three computer monitors in front of them. The leftmost monitor is partially visible. The middle monitor is the largest and shows a dark-themed code editor with many lines of white text. The rightmost monitor is a laptop and also shows code. The person is wearing a dark sweater with a colorful striped cuff. The background is dark and out of focus.

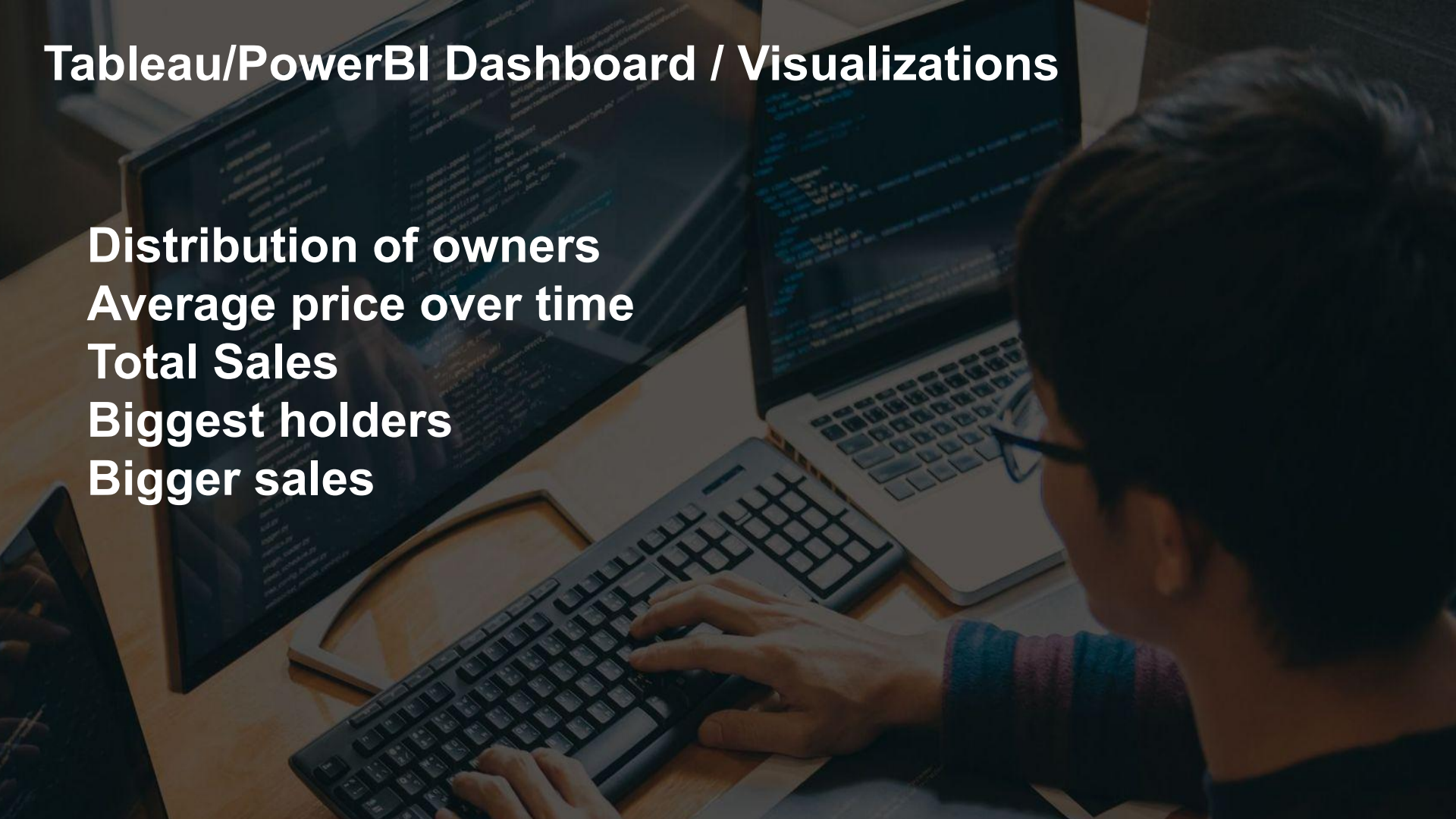
**How many transactions occurred?**

**What was the biggest? What was the smallest?**

**Who owns the most?**

**How do different projects compare?**

# Tableau/PowerBI Dashboard / Visualizations

A person with dark hair and glasses is seen from the side, working at a desk. They are using a large black keyboard. In front of them are two large monitors and a laptop. The monitors display code in a dark-themed editor. The laptop screen shows a data visualization, possibly a bar chart or table. The overall scene is dimly lit, with the primary light source being the screens.

**Distribution of owners**

**Average price over time**

**Total Sales**

**Biggest holders**

**Bigger sales**

# StreamLit Dashboard

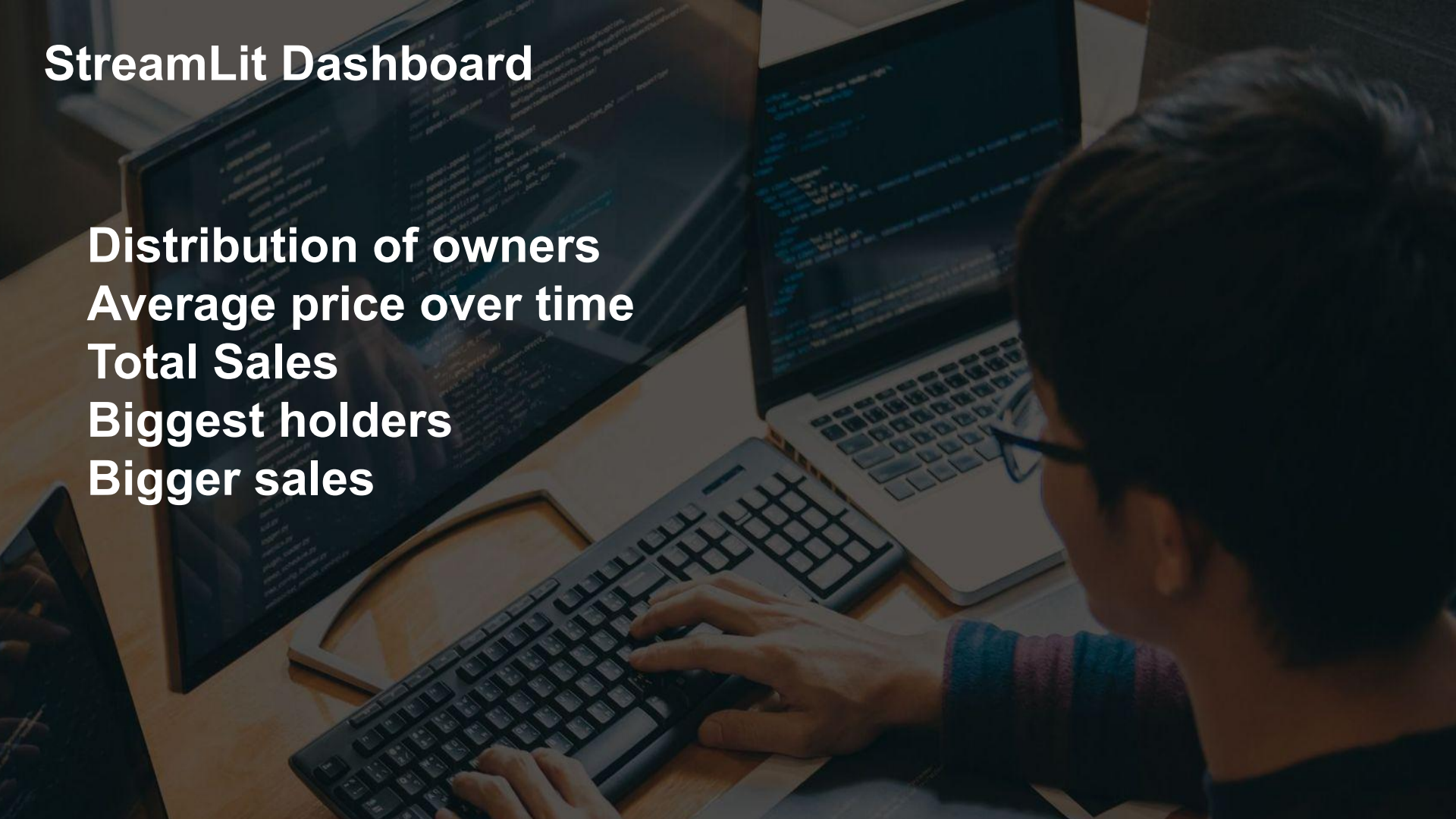
**Distribution of owners**

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**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 tranching 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 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.

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

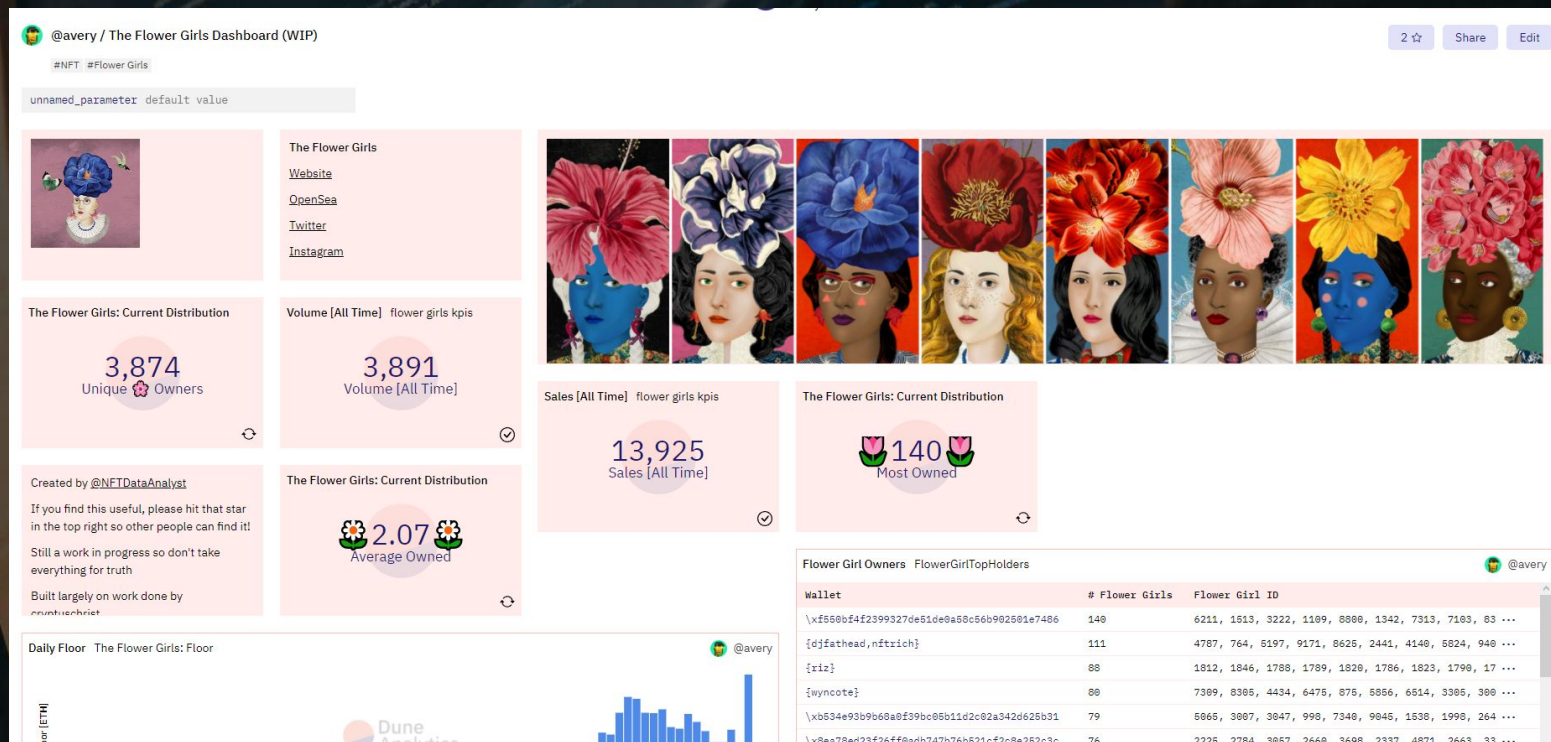
where

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



# Dune Dashboard

[Click to see link](#)



# Forecast a Project's Future Price

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

