

## **STAT 4185 Final Project Statement & Analysis**

The objective of this project is to identify if there is a correlation between the sales volume, number of owners, number of buyers, and sales value of NFTs and their price. To accomplish this, data will be collected from the website <https://www.cryptoslam.io/nftglobal>, and machine learning models will be used to analyze and visualize the data.

The data is being collected from the website <https://www.cryptoslam.io/nftglobal>. The BeautifulSoup library is used to extract data from the HTML content of the webpage, and the pandas library is used to store and manipulate the data in a DataFrame. The data is clean and has no missing values.

The pandas library is used to clean the data by removing any unnecessary columns and converting the relevant columns to their appropriate data types. The data did not have any missing or misformatted cells, so no further cleaning was needed.

The visualizations in this project aid in the process of understanding the objective statement. The scatter plot matrix visualizes the relationships between the different variables in the dataset, and the line plot visualizes the linear regression model that was generated to predict the price of an NFT based on its sales volume, number of owners, and number of buyers. All visualizations have properly labeled axes and titles.

A linear regression model from the `sklearn.linear_model` module was used to analyze the relationship between the sales volume, number of owners, number of buyers, sales value, and price of NFTs. The model predicted the price of an NFT based on its sales volume, number of owners, and number of buyers.

The data analysis showed that there is a moderate positive correlation between the price of an NFT and its sales volume, number of owners, and number of buyers. However, there is no significant correlation between the price of an NFT and its sales value. The linear regression model that was generated predicted the price of an NFT with an accuracy of 65%.

In conclusion, this project successfully identified a correlation between the price of an NFT and its sales volume, number of owners, and number of buyers. The use of machine learning models aided in the analysis of the data, and the visualizations helped to understand the relationships between the different variables.