15.071 - Analytics Edge – Final Course Project – Blockchain Digital Asset Price Prediction

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Project Idea: Our goal is to predict the price of NFT(or any digital asset on a blockchain) using available information. Currently, there are not many credible sources which can reliably predict the price for a NFT or Digital Asset. As transactions in Digital Assets may increase in next few years, building a model that can help in predicting price for these assets can be helpful. We hope to eventually be able to provide a credible, independent, 3rd party rating for each NFT collection which can then be used by individuals, companies, and institutions to invest in NFTs or any other digital assets.

Project Scope/Data Collected: We have downloaded NFT historical sales data from Kaggle (https://www.kaggle.com/datasets/francescofalleni/nft-historical-sales). We used this dataset of more than 100K rows to build our understanding of predictors for Digital Assets and to gain knowledge of trends in NFT sales. Further, we downloaded a smaller dataset which has the relevant predictors and price information. Using this dataset, we have built our model to predict NFT prices.

Analytical Models used:

We have used Linear Regression, Polynomial Regression, CART, and XGBoost to build our models. Results are summarized below:

S.No.	Analytical Model	R2	OSR2
1	Linear Regression	.6718	.6129
2	Polynomial Regression(Rarity degree = 6)	.749	.772
3	CART (cp .001)	.817	.703
4	CART(cp .00001)	.822	.706
5	XGBoost		.938