Analysis of Kickstarter Campaigns

Tyler Zarnik

Purpose of the Analysis

The primary purpose of this project is to attempt to compile a comprehensive analysis of publicly available Kickstarter datasets with the goal to provide visualizations of the data as well as a machine learning model that will predict and give a probability of if the campaign will be successful. Kickstarter only collects on successful campaigns at 5% of pledge amount.

Overview

Problem Statement

- In accordance with Kickstarter's continued efforts to operate as a "Benefit Corporation", the company is looking to take a data driven approach to continue to provide information that fosters more successful campaigns from creators on the platform. These data driven insights may be able to help creators understand what successful campaigns are doing right. There is also a desire to have this data predict which campaigns will be successful based on metrics of similar campaigns provided.

Workflow

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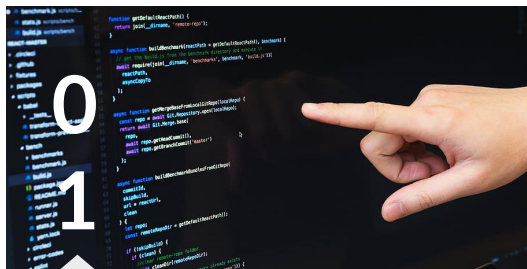
Gathering & Cleaning the data

Data was gathered and combined from two Kickstarter data sets.

Dataset contained 300,000 of the rough 490,000 total campaigns in company history.

Exploratory Data Analysis

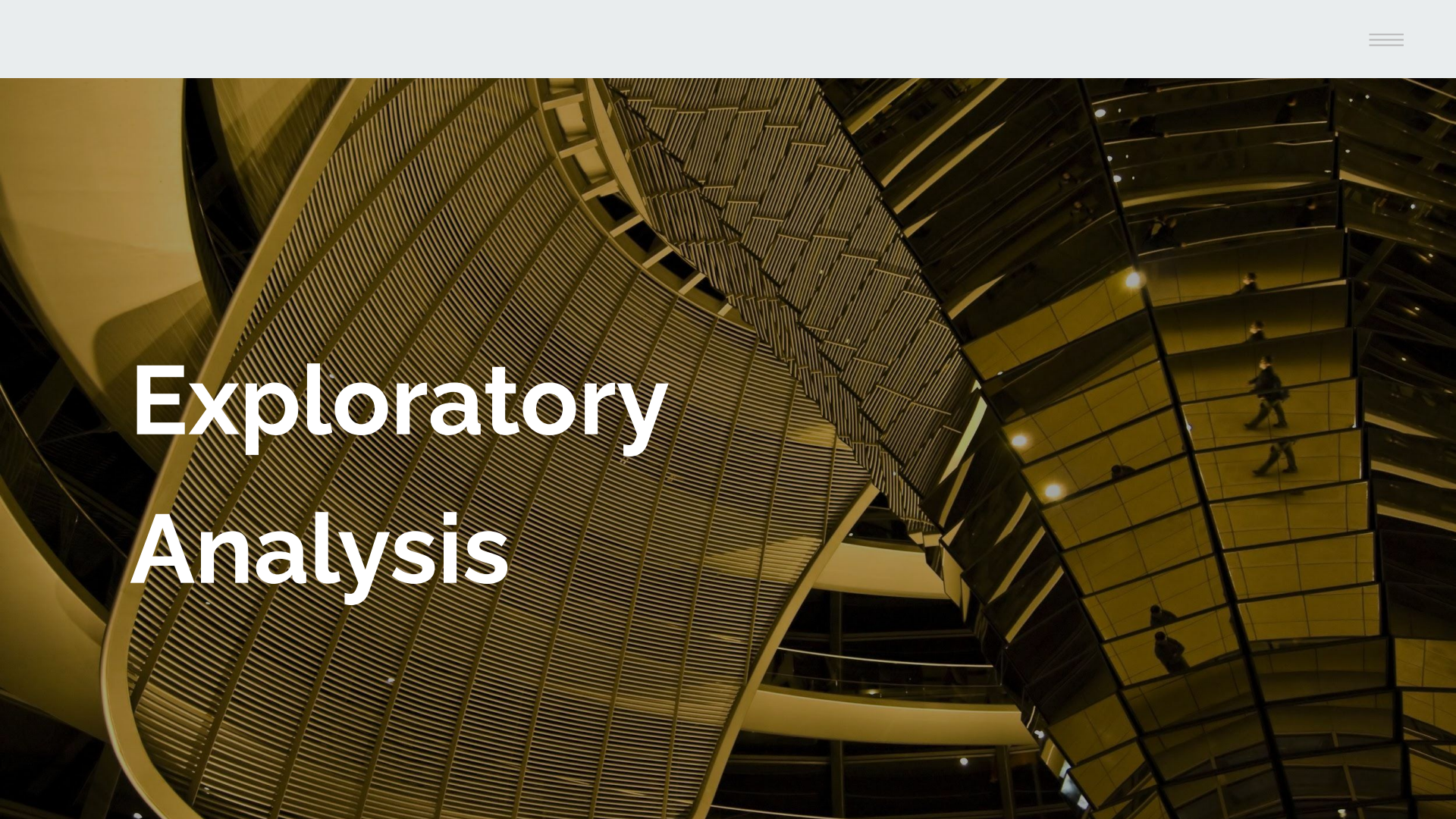The goal was to improve or corroborate the current tips given by Kickstarter.

Analysis wanted to be implemented in the model predictions as well.

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Modeling

Using multiple models both predictive and explanatory, wanted to predict whether a live campaign would be successful in reaching goal.

Exploratory Analysis

The dataset contained 300,000 of the 490,000 campaigns:

Main Features of the Data:

- Backer Count
- Launch Date
- Duration
- Words Used in Title and Description
- Pledge Goal

Problems Facing Kickstarter

Larger campaigns that have been successful in the past are leaving the platform.
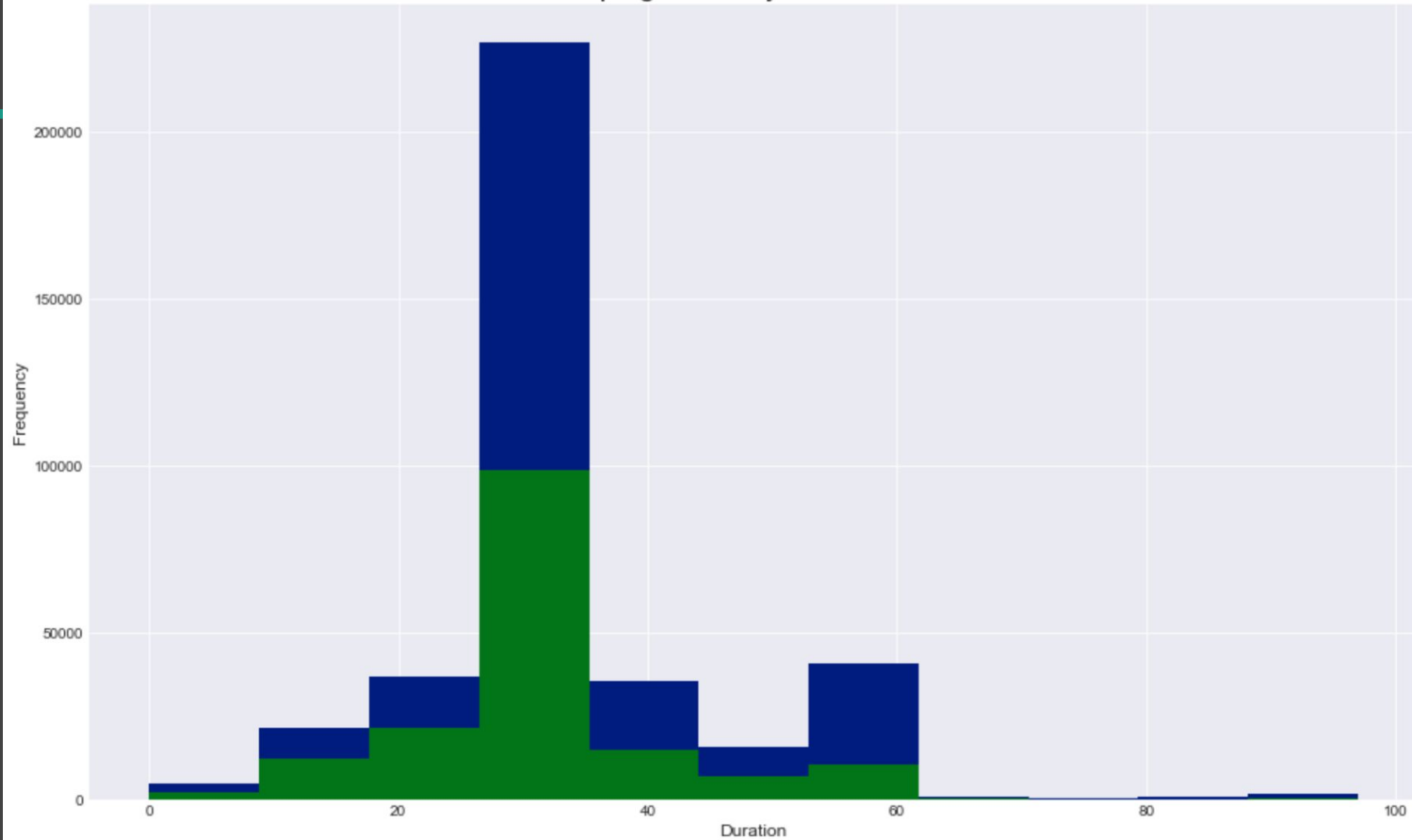
23,000 campaigns from creators that are always successful have had 650 Million pledged (company total is 5.2 Billion).

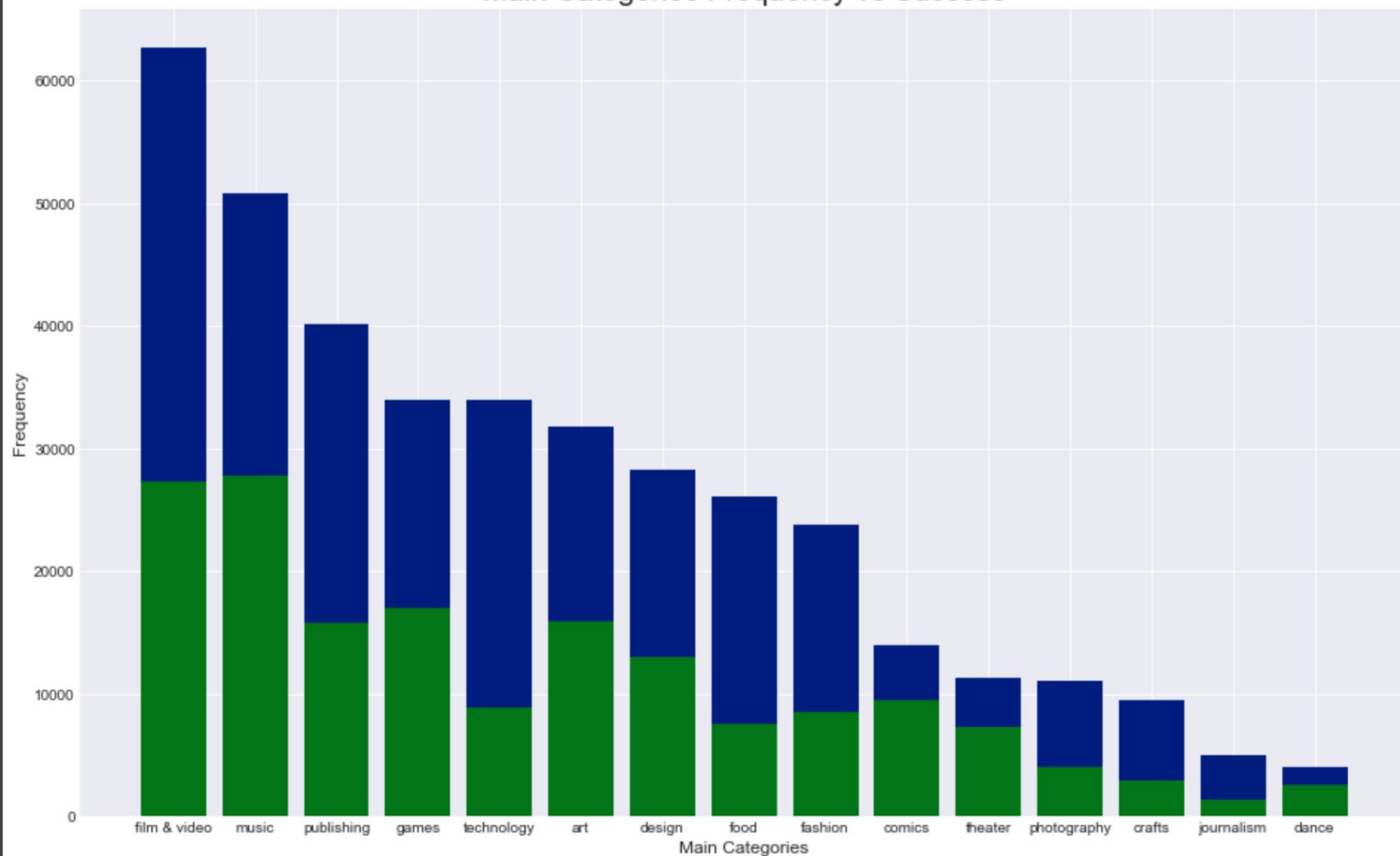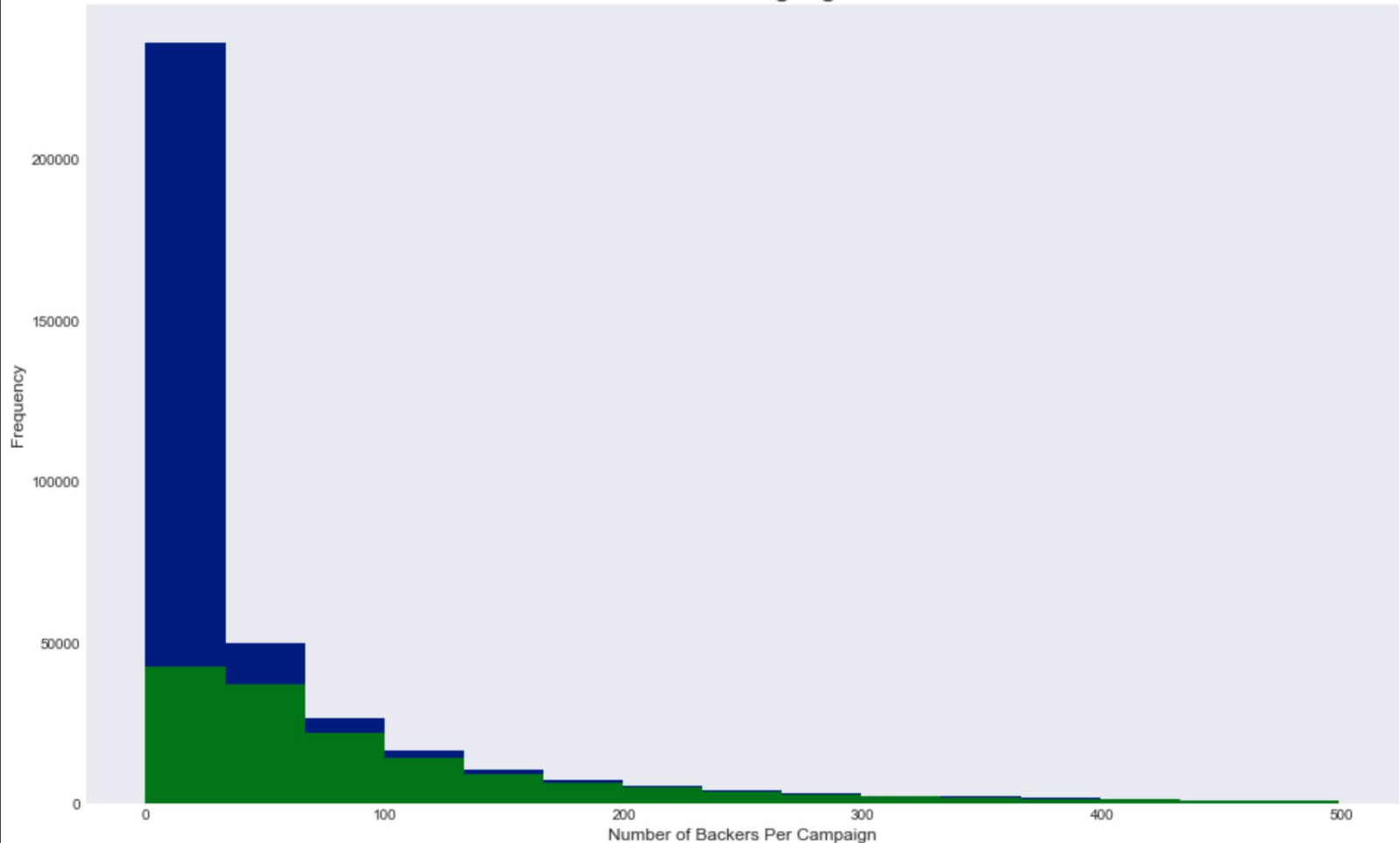64% of creators that run multiple campaigns, are successful more than half of the time.

Distribution of Duration of Campaigns in Days With Color Portion of Success: Bins 11

Main Categories Frequency vs Success

Distribution of Backers with Success Highlighted: Less Than 500 Backers

Repeat Creators vs First Time Creators:

- Between first time creators and repeat creators there are some significant differences in averages.
- The average amount of USD pledge for successful first time creators campaigns is $10,000 while for successful repeat creators is $17,000.
- Interestingly, The average amount of USD pledge goal for successful first time creators campaigns is $44,000 while for successful repeat creators is $40,000.

Key Takeaways:

- Most campaigns are in the category collected towards the bottom with pledge goals less than 5,000.
- The most common categories are often the ones that do not perform as well. Music, Comics, Theater are the most successful but also not as common.
- Successful campaigns have more backers - successful campaigns have more low pledge backers than fewer high pledge backers.
- Most campaigns run up to the one month mark, shorter campaigns tend to perform better.
- Repeat successful creators bring in larger pledges per campaign on average.

Model Scoring

Our Logistic Regression gave us the strongest coefficients for number of backers.

Our Logistic Regression will be the model that we deploy as this will allow us to best follow our recommendations.

Logistic Regression |

Accuracy | 91.2

Cross Validation | 91.3

Random Forest |

Accuracy | 96.6

Cross Validation | 95.6

Recommendations

- Deploy a model that will be able to return the probability that a campaign will succeed based on simple stats such as backer count, duration, title/description, goal, and current pledged amount.
- With the deployed logistic regression, it can give specific tailored information on best ways to move forward with the strongest coefficients.
- Incentivize repeat creator projects. Give lower percentages to creators who consistently produce successful campaigns.
- Work to give more spotlight to newer campaigns and encourage past successful creators to re-engage with the platform with discount percentage incentives.

Conclusions

- As revenue for the company is derived directly from the success of its creators, Kickstarter has an incentive to invest in its creators as much as possible.
- While there are great resources provided by Kickstarter on best practices and beginners info, this info sometimes is not directly tailored to a customer.
- Creating and deploying a model that is able to give a predicted probability of success as well as identify important features of successful campaigns, will aid new creators to be successful.
- As seen, creators that have successful campaigns will also be more likely to have future successful campaigns which also often get more pledge USD per campaign.

References:

- https://www.kickstarter.com/help/stats?ref=global-footer
- https://www.forbes.com/sites/jaredhecht/2020/08/31/is-crowdfunding-a-good-option-for-businesses-during-the-pandemic/#3184ee5565f0
- https://www.kickstarter.com/charter?ref=global-footer
- https://www.cnbc.com/2014/09/23/the-man-who-made-50-million-ditching-kickstarter.html