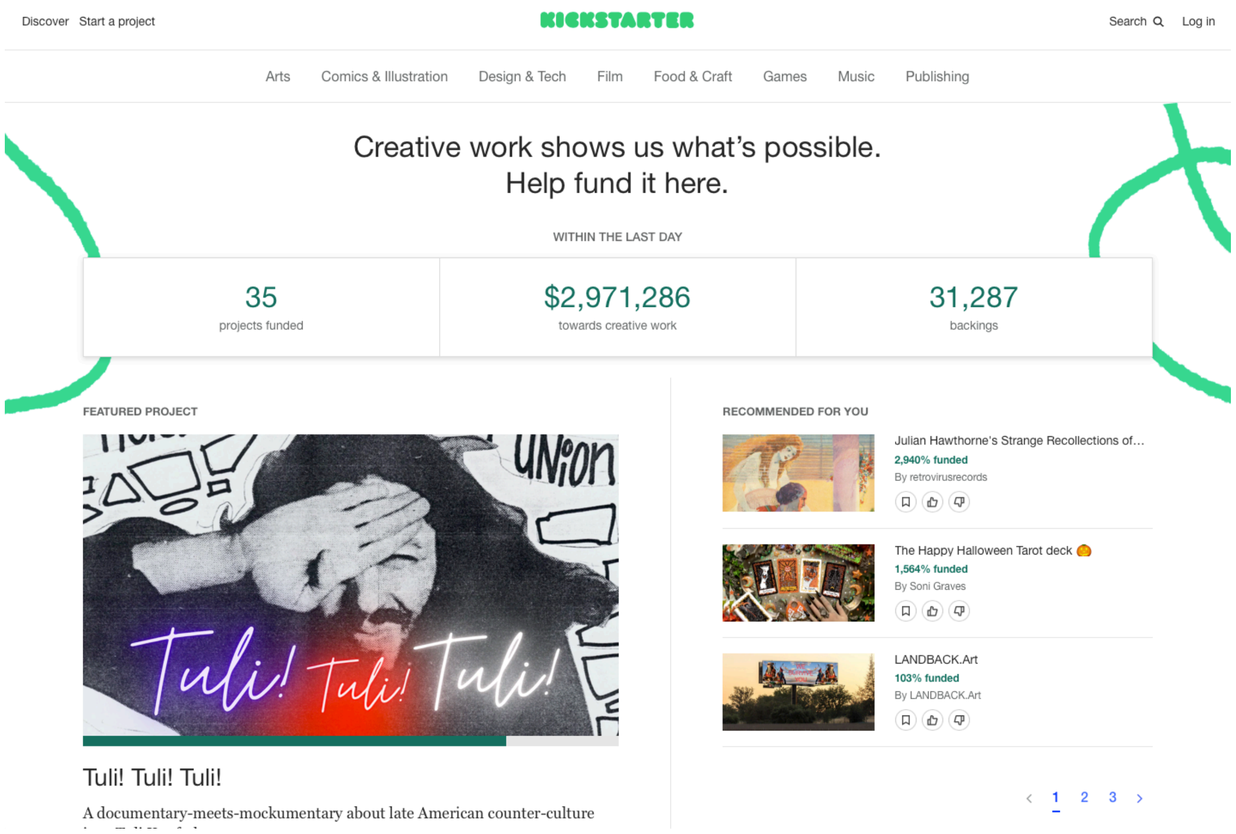
Kickstarter Campaigns

Predict and Avoid Failure

Atrin Sarmadi - Metis Classification Project

Kickstarter



Our mission is to help bring creative projects to life.

Since our launch, on April 28, 2009, **20 million people** have backed a project, **$6.2 billion** has been pledged, and **210,508** projects have been successfully funded.

https://www.kickstarter.com/about?ref=global-footer

STATS

Kickstarter Revenue:

5% of funds pledged for successful projects

Failed Projects:

23% of projects since March 2020 have failed

STATS

60 days preparing campaign page

32 days of campaigning and raising funds

Methodology

Goal

Build a classification model that predicts the projects that are more likely to fail

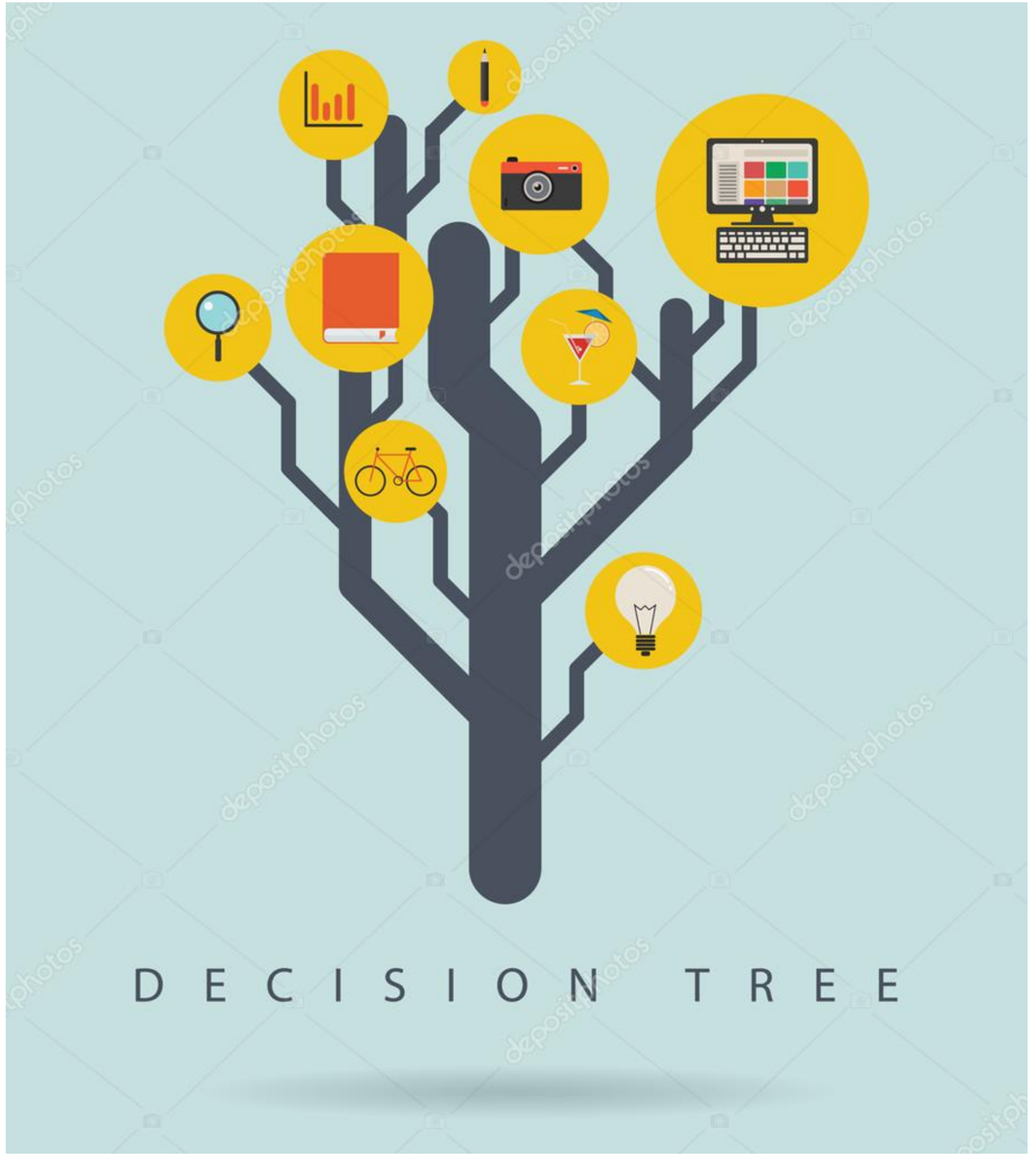
Impact

Identifying and adjusting failing projects can increase the success ratio

DATA

1.2m projects, 39 attributes

Scraped by Web Robots



Classification Methods

- KNN
- Logistic Regression
- Decision Tree
- Random Forest
- XGBoost

Metrics

- F1

A combination metric that takes recall and precision into account

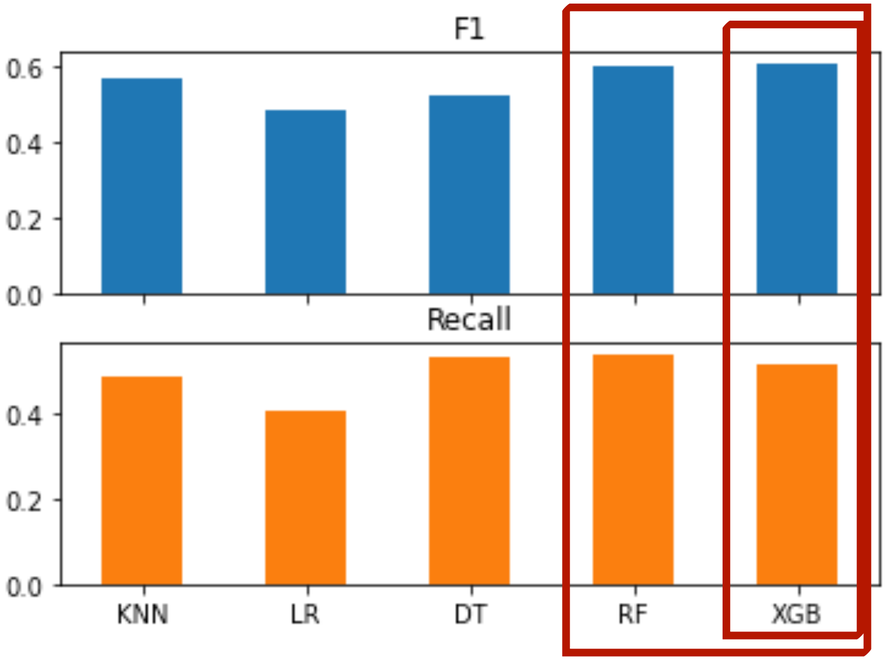
- Recall > fraction of relevant instances that were retrieved
- Precision > fraction of relevant instances among the retrieved instances

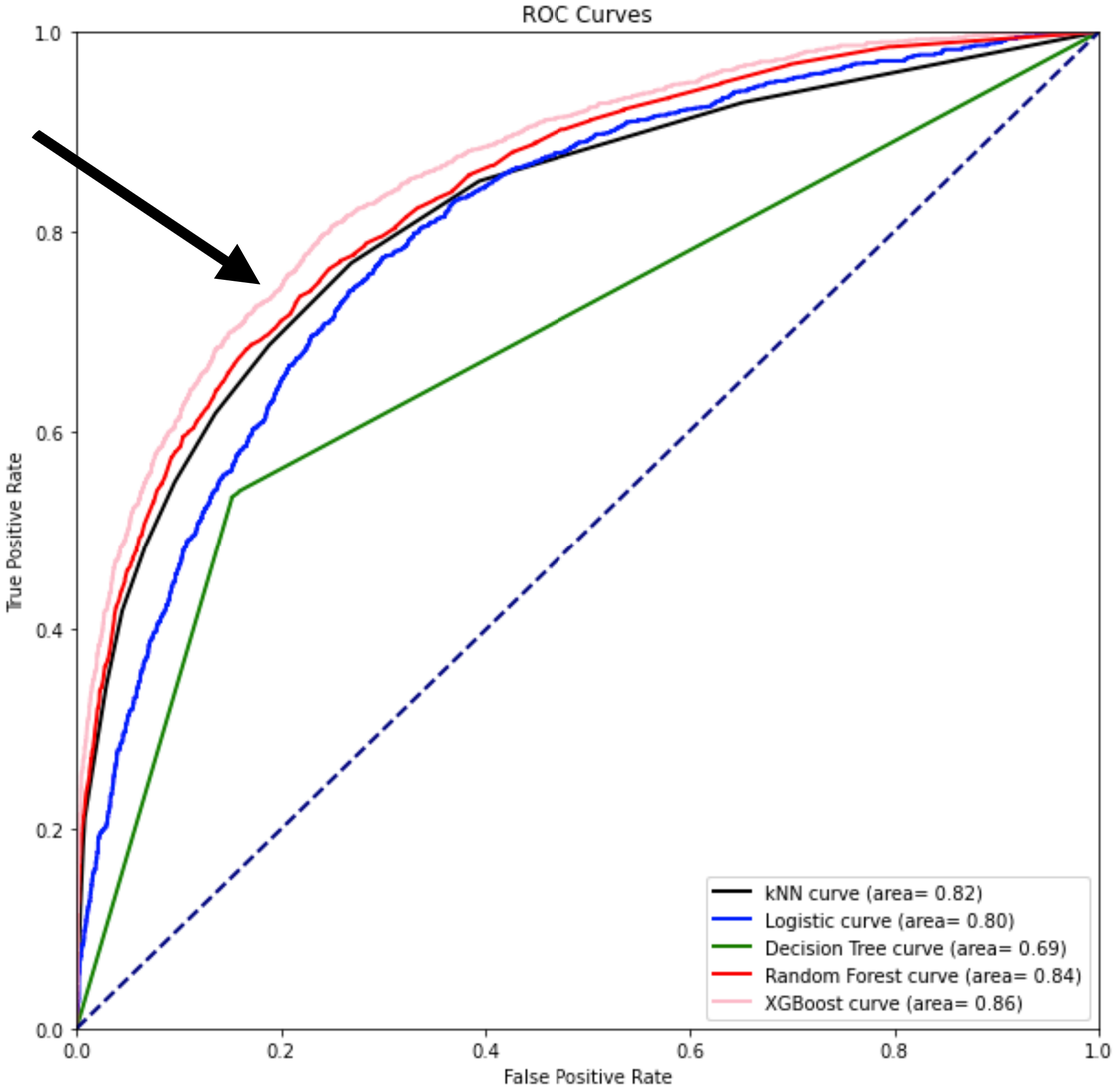
- ROC/AUC curve

A visualized comparison metric to find best performing classification method

Results

Model Comparison

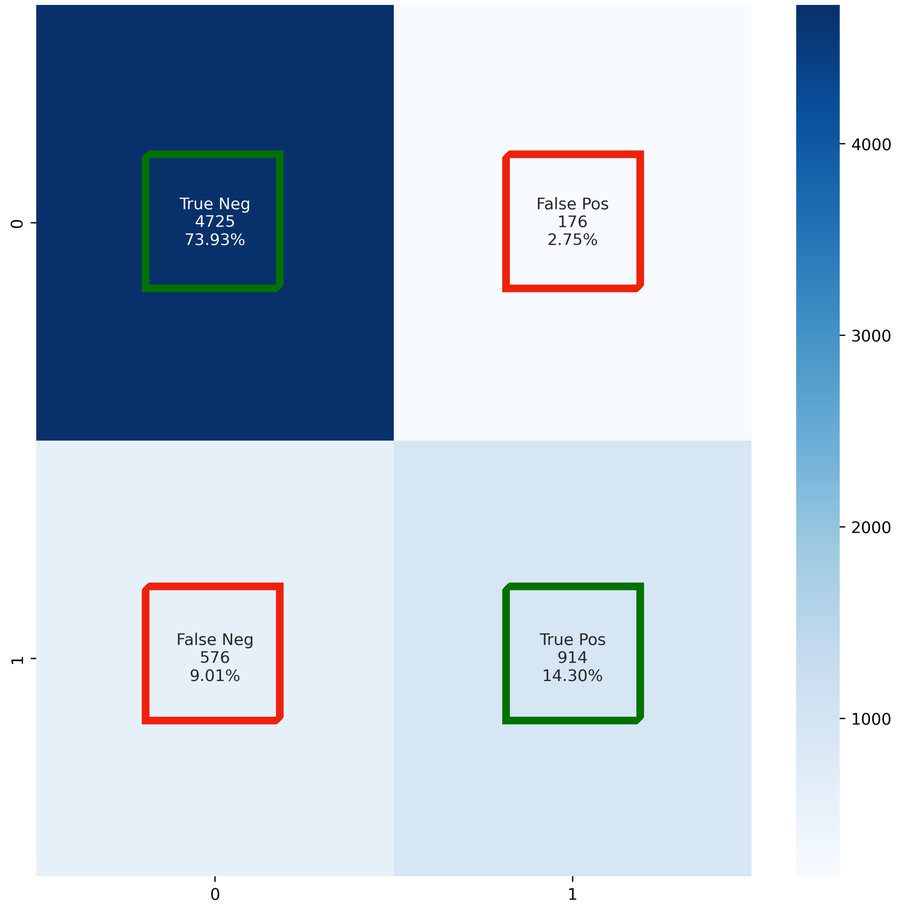




XGBoost

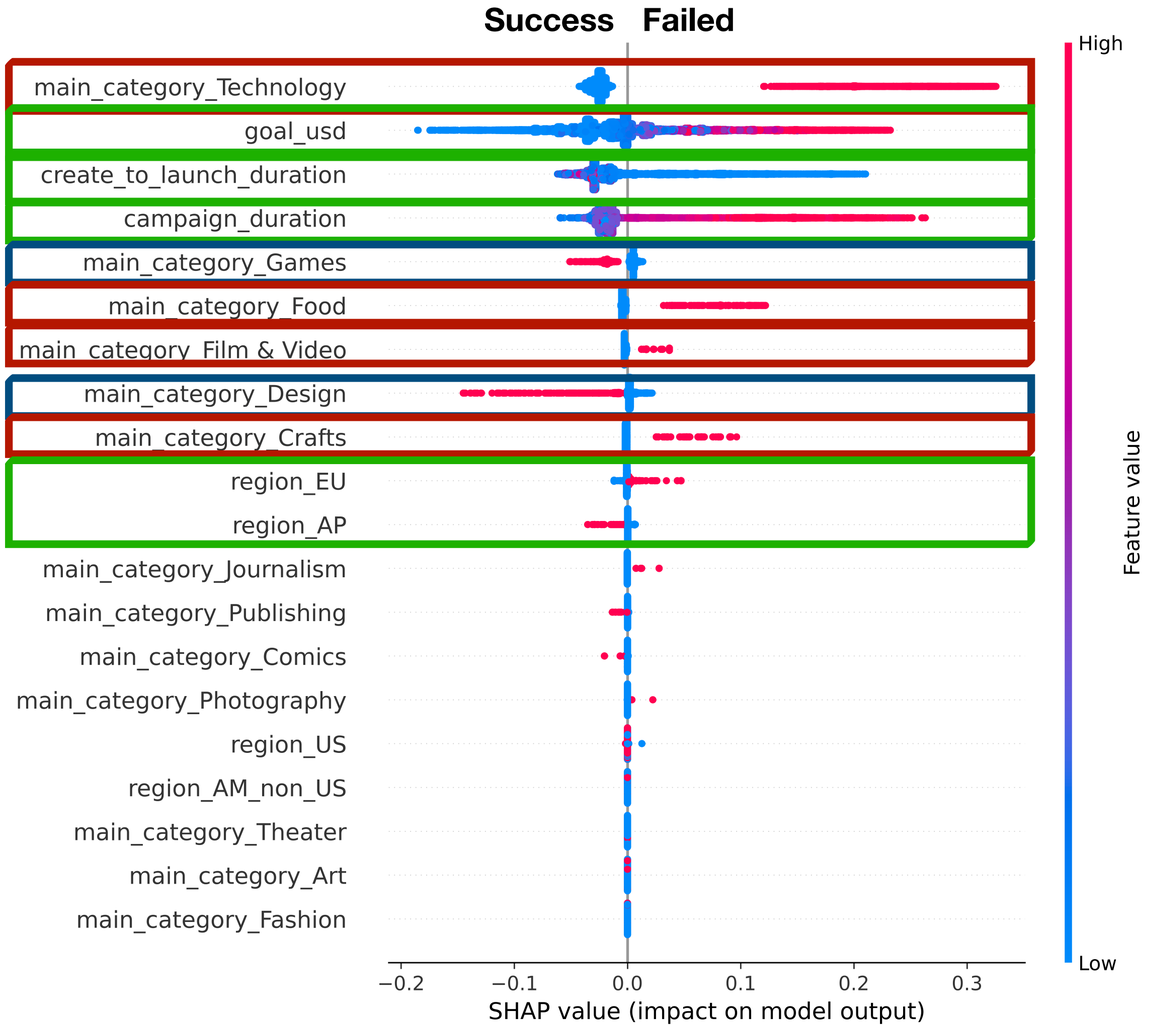
Final Model Test Results

	Baseline Model (Logistic Regression)	Final Model (XG Boost)
F1	0.52	0.71
Recall	0.42	0.61
AUC	0.79	0.92



Feature Importance

- Technology, food and craft projects have low chance of success, unlike design and games projects
- Lower funding goals have higher success rate
- Faster creation time improves chance of success
- Projects based in Asia and Pacific have higher chance of success, unlike projects in Europe



Future Work

- Improve model
  - Decrease data imbalance
  - More hyperparameter tuning for XGBoost Model
- Update dataset regularly, interests and stats keep changing
- Build a soft classification model that can tell which projects to priotrize adjusting