

# Patterns in Kickstarter projects

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The image shows the official Kickstarter logo, which consists of the word "KICKSTARTER" in a bold, sans-serif font. The word "KICK" is in black, and "STARTER" is in a vibrant green. The logo is centered within a white rectangular box. The background of the entire slide is a teal color with faint, abstract geometric shapes like circles and vertical bars.

August 15, 2017



# Overview of Kickstarter

- Crowdfunding website
- 15 categories of projects ranging from Art to Technology
- Over 13 million backers
- Over \$3.2 billion pledged
- 120,000 projects successfully funded\*

\*A successful project is one that receives the minimum amount of funding by their deadline



# Our Dataset

- All Kickstarter projects listed on the website on 07/15/2017
- Took a random sample of 50,000 from 200,000 projects
- Extracted country, category, and subcategory from project URL using regular expression
- Merged population data for each state

|   | A                       | B    | C     | D       | E        | F         | G         | H          | I         | J         | K          | L          | M          | N         | O          | P      |
|---|-------------------------|------|-------|---------|----------|-----------|-----------|------------|-----------|-----------|------------|------------|------------|-----------|------------|--------|
| 1 | name                    | goal | state | country | deadline | created_a | launched_ | staff_pick | backers_c | usd_pledg | static_usd | projectlen | category1  | subcatego | projectlen | status |
| 2 | Racial Reconciliation M | 5000 | NC    | US      | 1.48E+09 | 1.48E+09  | 1.48E+09  | FALSE      | 8         | 262       | 1          | 2540516    | music      | faith     | 29.40412   | 0      |
| 3 | Poetic Cultivation      | 1500 | FL    | US      | 1.41E+09 | 1.4E+09   | 1.4E+09   | FALSE      | 0         | 0         | 1          | 2592000    | publishing | poetry    | 30         | 0      |
| 4 | Picoso's Fourth Album   | 9800 | WA    | US      | 1.4E+09  | 1.4E+09   | 1.4E+09   | FALSE      | 92        | 9875      | 1          | 3110400    | music      | world%20  | 36         | 1      |



## **Objectives & Motivations:**

- Get an understanding of the popular crowdfunding industry
- Uncover the key attributes to a successful/unsuccessful project on Kickstarter
- Be able to predict whether a project is successful or not



# Target audience

- **Kickstarter**
  - Help Kickstarter make more money by identifying which attributes bring in the most money
- **Project owners**
  - Help project owners know which attributes are linked to success, and their probability of success



# Exploratory Data Analysis

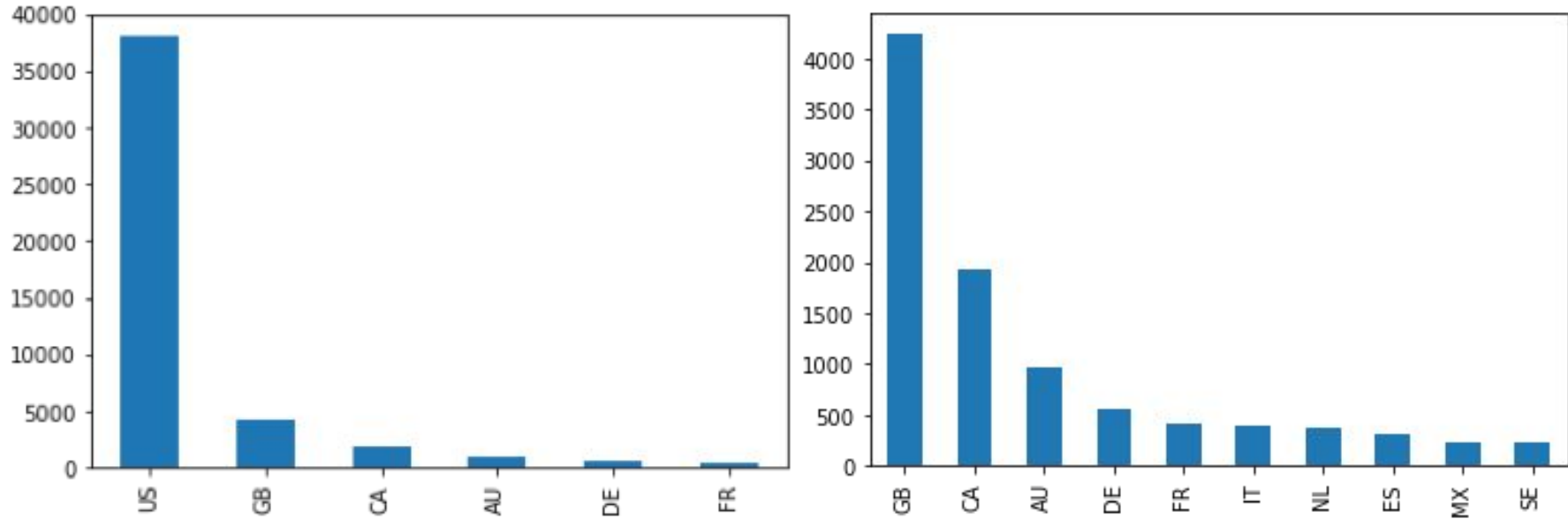
- Three categories of analysis:
  - Locations
  - Categories
  - Interactions between different variables

# Geographical Analysis





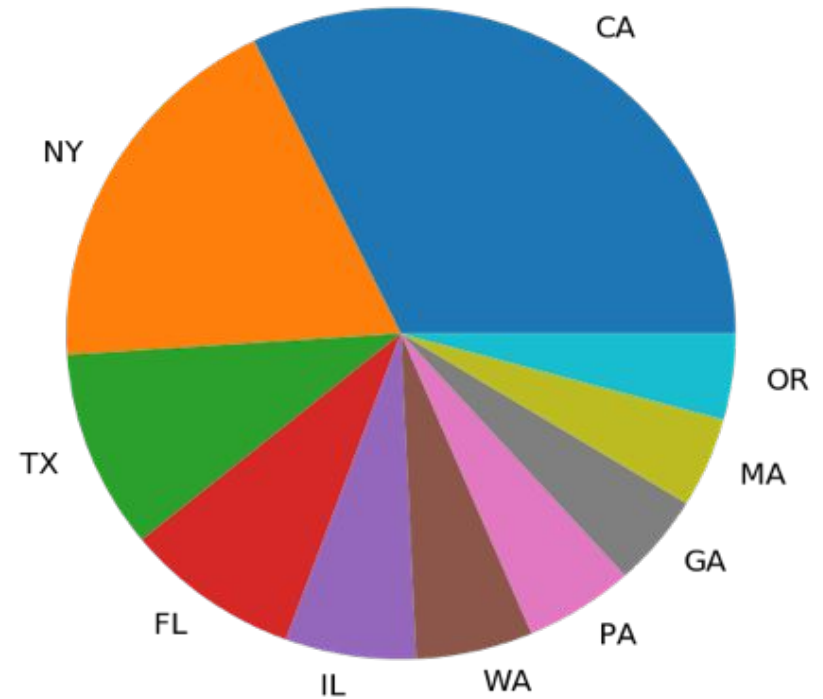
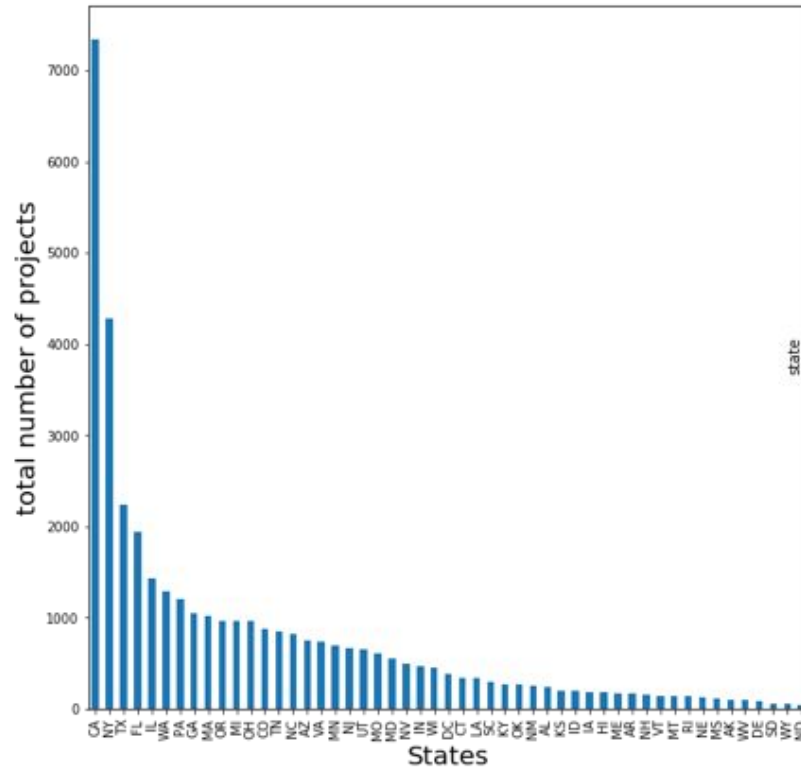
# Countries Vs. No. of Projects

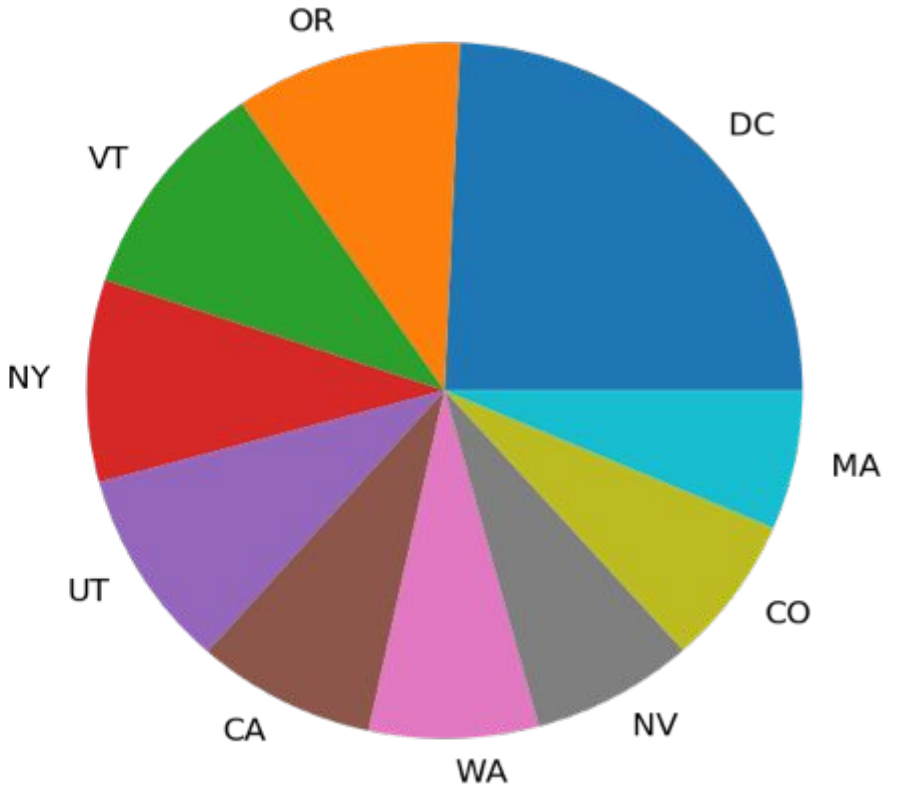


US has the most amount of projects, so we focused only on the projects within the US



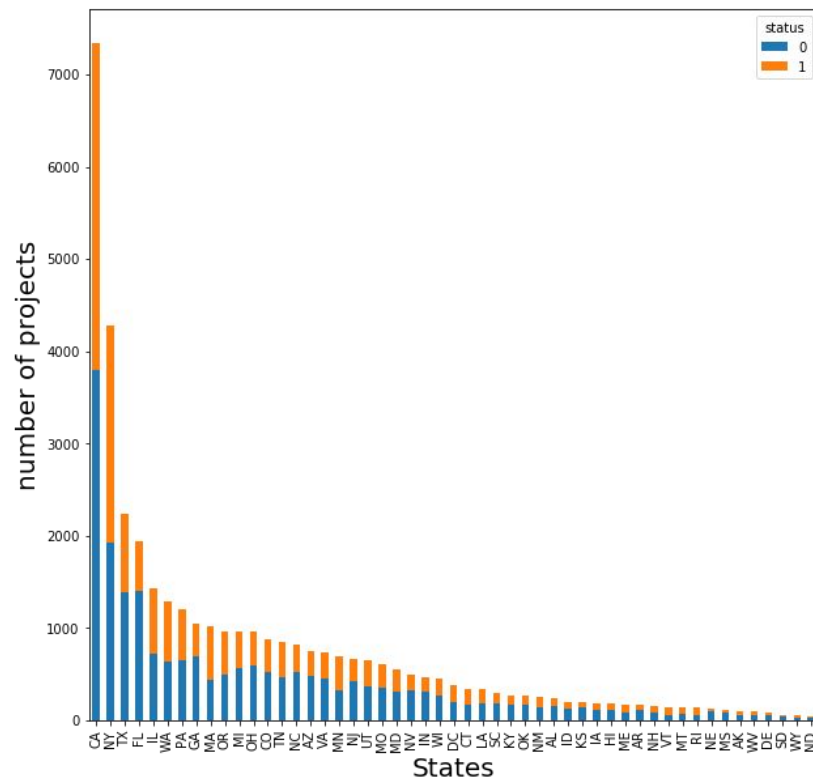
# States Vs. No. of Projects





# States Vs. Success Rate

| State | Success Rate | No. of Projects |
|-------|--------------|-----------------|
| VT    | 0.6081       | 148             |
| RI    | 0.5786       | 140             |
| MA    | 0.5694       | 1015            |
| NY    | 0.5500       | 4278            |
| MN    | 0.5318       | 692             |
| MT    | 0.5177       | 141             |
| WA    | 0.5070       | 288             |
| IL    | 0.5003       | 437             |
| CT    | 0.4918       | 970             |
| CA    | 0.4818       | 7335            |



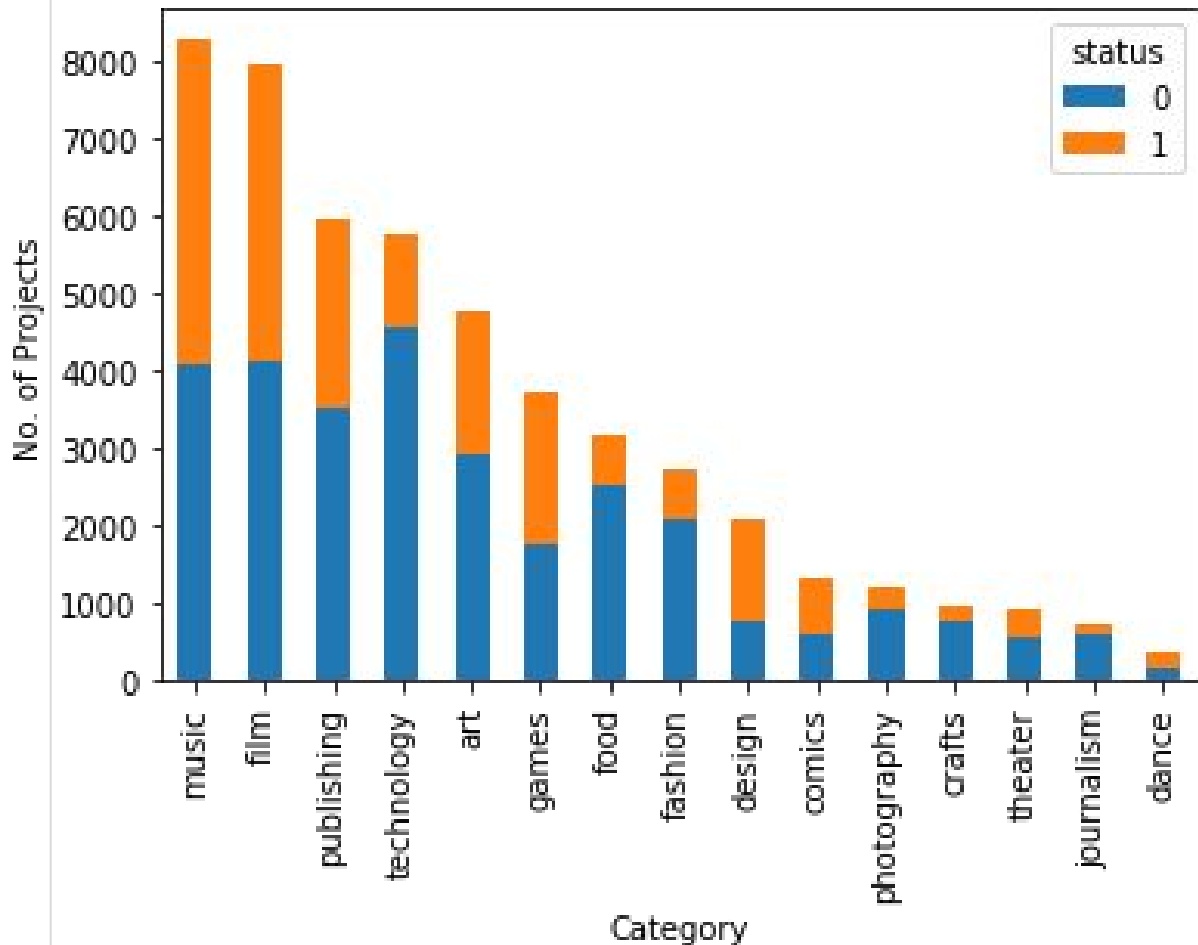
# Category Analysis



# No. of projects by category

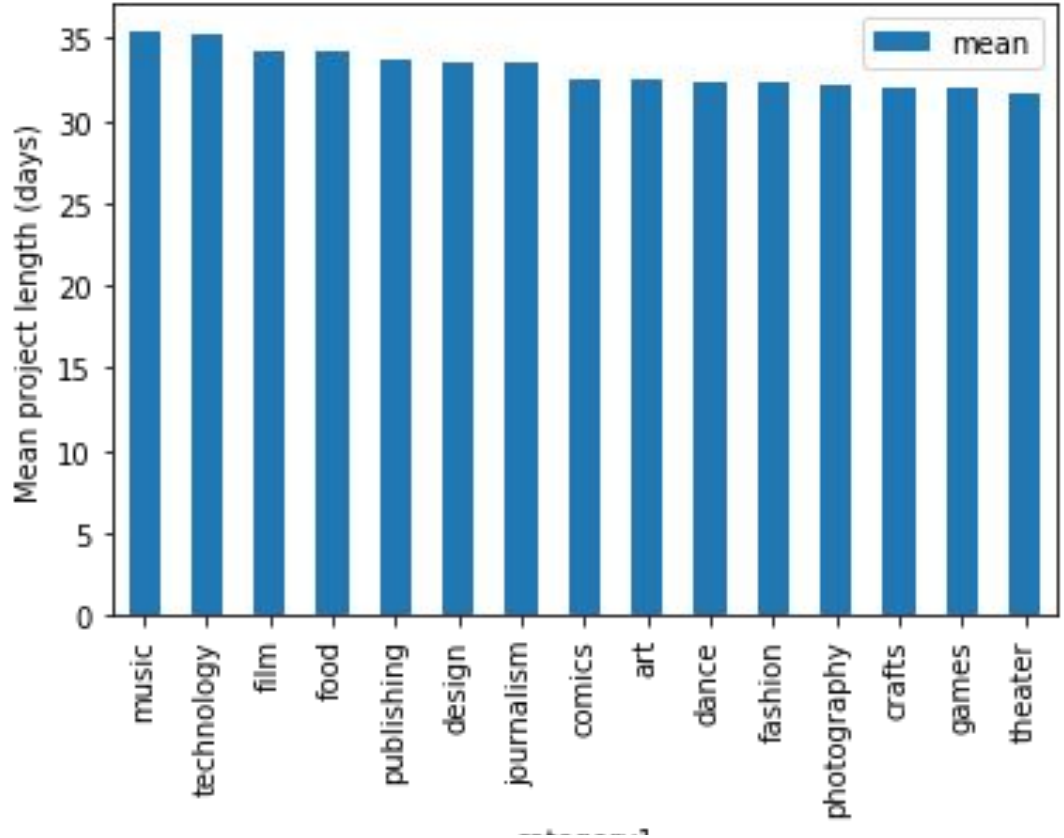
## TOP CATEGORIES:

- Music
- Film
- Publishing
- Technology
- Art



# Average Project Length

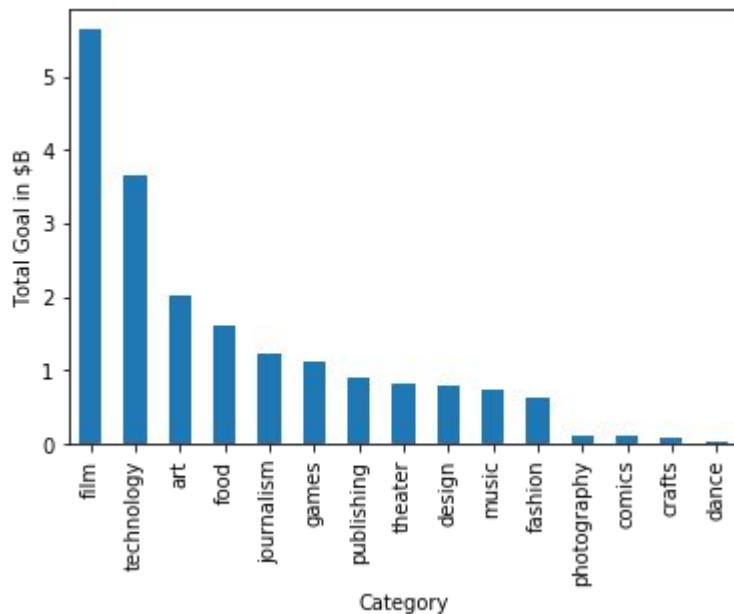
Mean project length similar across all categories



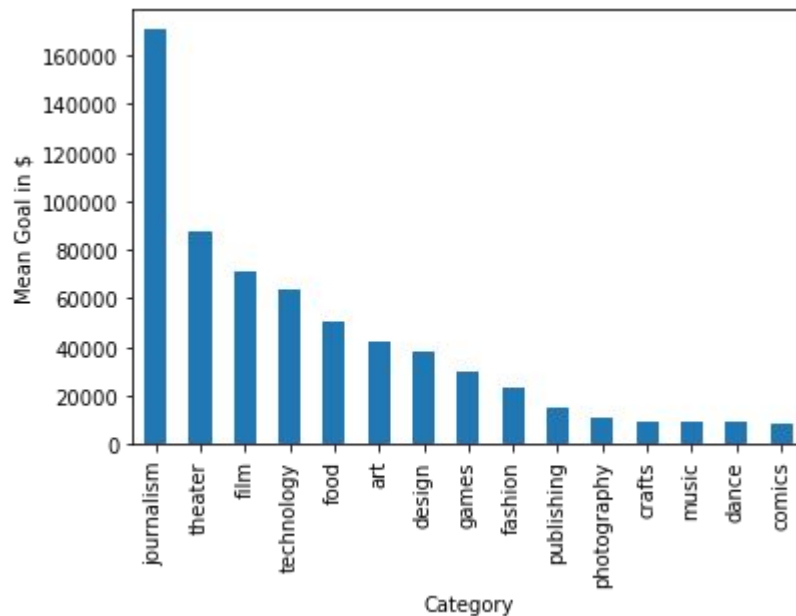


# Goal by Category

Cumulative project goals

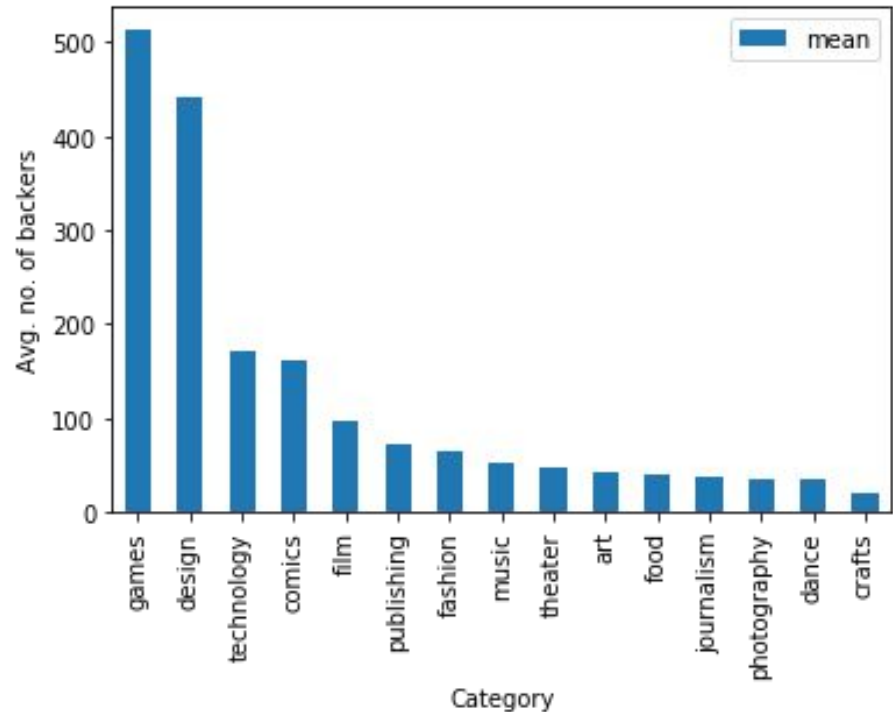


Mean goal per project



# Average no. of backers per project

Games and Design projects are more popular among investors

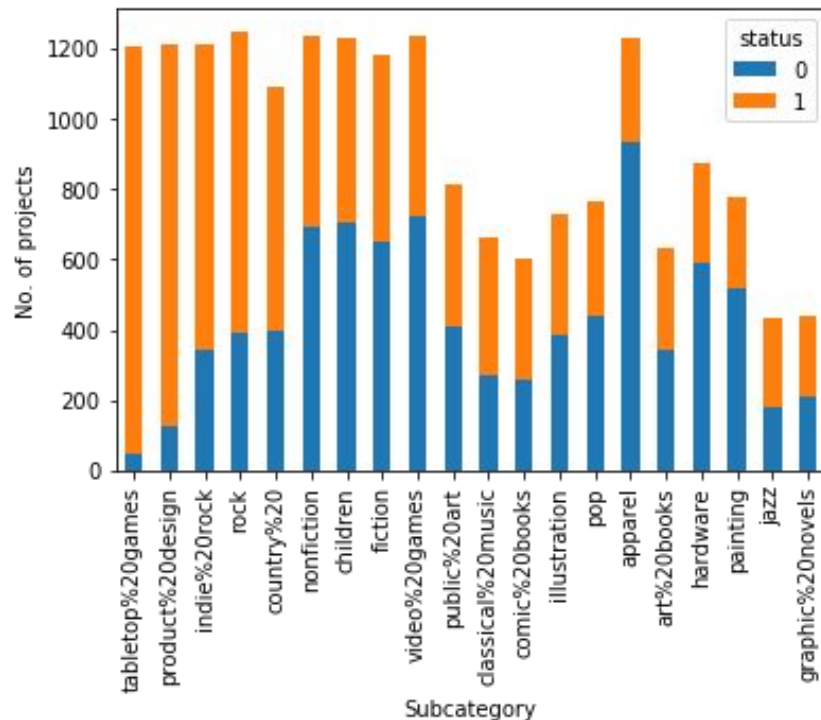




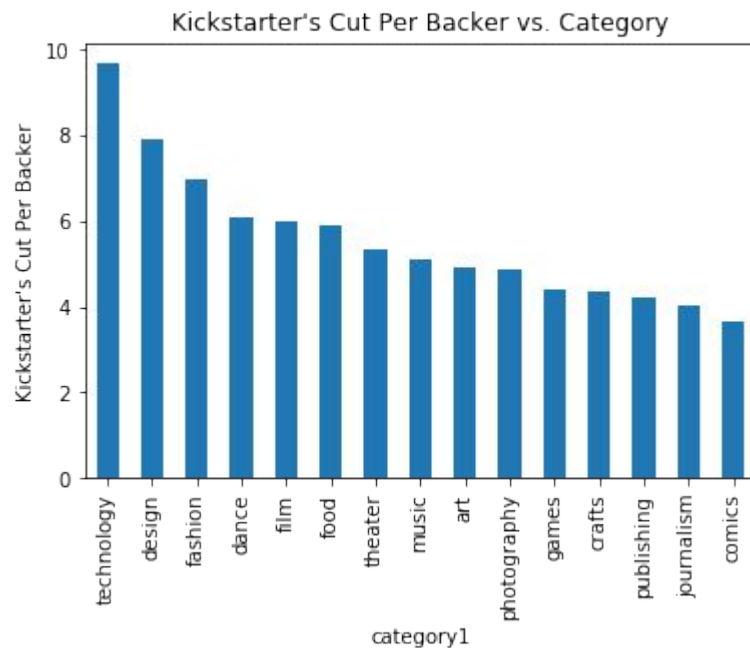
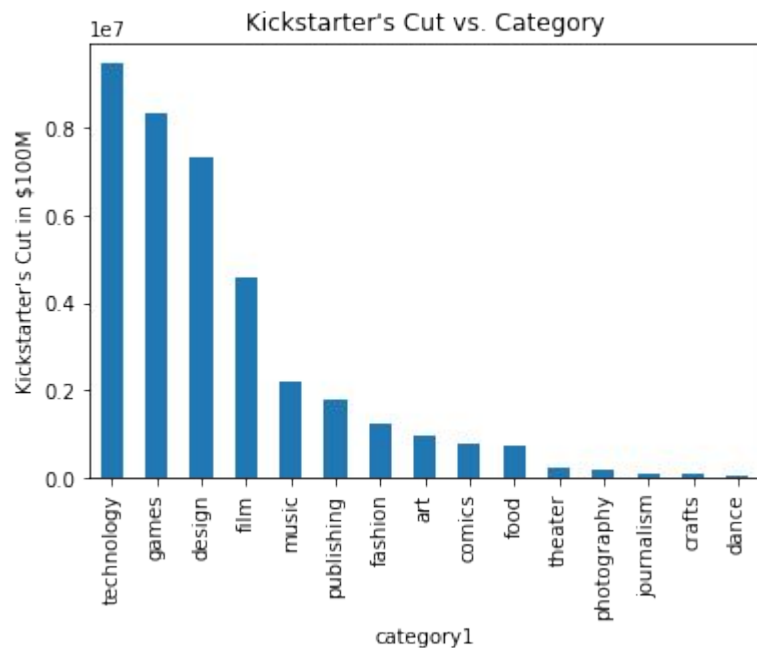


# Most popular subcategories

Tabletop Games and Product Design projects have highest success ratio



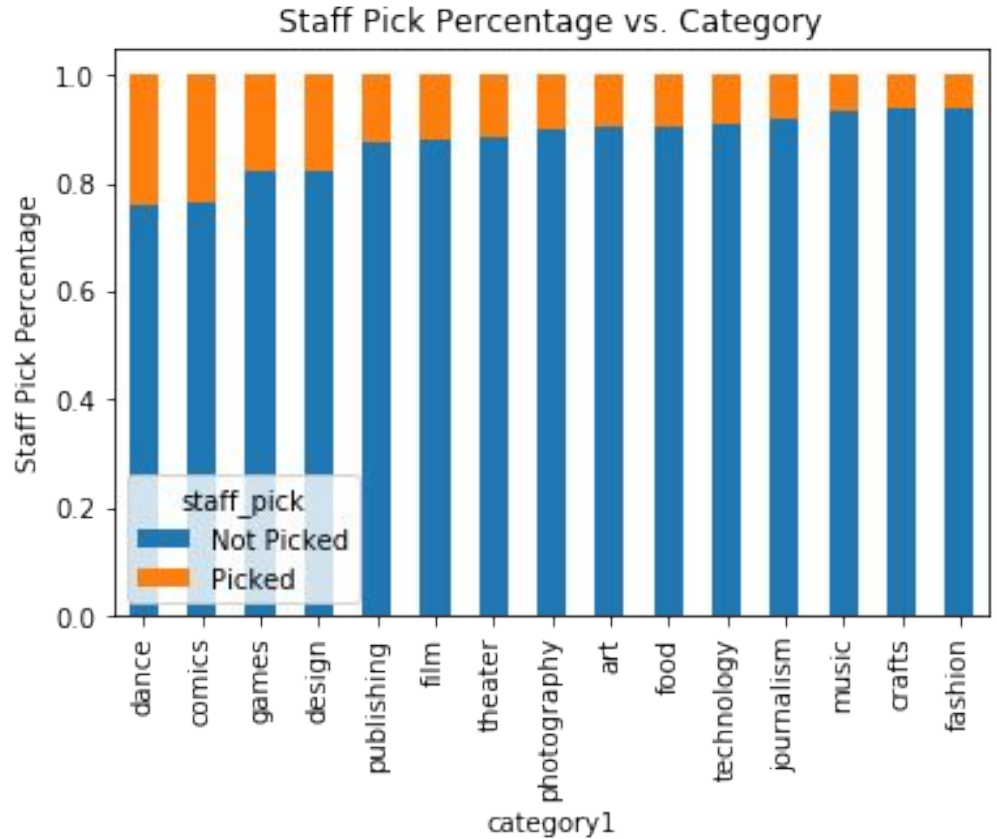
# Kickstarter's Cut



# Staff Pick Percentage Vs. Categories

## TOP CATEGORIES:

- Dance
- Comics
- Games
- Design
- Publishing

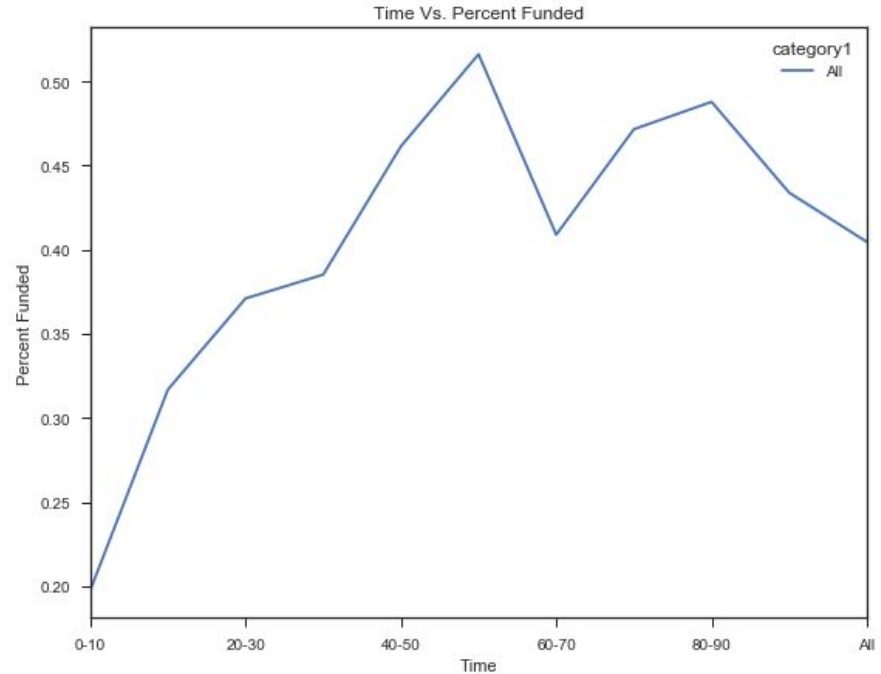


# Time Vs. Average Percent Funded

Average funding grows for  
initial 30-40% of projects

Then averages out to around  
45%

Different projects at each  
point, allows for crude  
estimation



# Predictive Model

Important variables and results



## A Predictive Model from the Creator's Perspective

### Predictors

Project length in Days

Goal

Category

State

Subcategory

### Response

Successful/Not Successful



# Predictive Models

## Models Tried:

Regression

Logistic Regression

Trees

Random Forest/Boosting



# Logistic Regression

## Important Variables for Success:

1. *Tabletop Games*
2. *Product Design*
3. *Music*
4. *Design*
5. *Games*

## Important Variables for Failure:

1. *Project Length in Days*
2. *Technology*
3. *Food*
4. *Fashion*
5. *Florida*



# Prediction Model Test Results

**Best Model:** Boosting with 500 trees, 0.01 learning rate, and tree depth of 4

|        | Predicted     |               |        |
|--------|---------------|---------------|--------|
| Actual |               | Not<br>Funded | Funded |
|        | Not<br>Funded | 4744          | 812    |
|        | Funded        | 1966          | 2133   |

**Baseline Accuracy: 57.5%**

**Model Accuracy: 71.2%**



# Proposed deliverables

## Deliverable 1

- Project owners can see which states/categories are more 'friendly' towards crowdfunding, in which they can better spend their advertising

## Deliverable 2

- Users can understand their odds of success based on their project attributes

## Deliverable 3

- Kickstarter can begin to advertise the projects which bring in the most money for them



## Future Research

- Backer attribute data would give more insights into the types of people who back certain projects
- Creator profile data would help determine how social media/marketing impacted the project
- Following projects over time would help gain insight on funding patterns