
Kickstart Your Kickstarter:

Intelligent Recommendations for Projects on the Edge

— Rob Pagano —

Kickstarter Recommender - Background

KICKSTARTER

Arts Comics & Illustration Design & Tech Film Food & Craft Games Music Publishing

- **Kickstarter:** platform for creators (artists, musicians, game makers, inventors) to crowdsource funding for projects
- **Project Goal:** train a classification model to identify projects on the cusp of being successful or not, and use NLP techniques to promote them via similar projects

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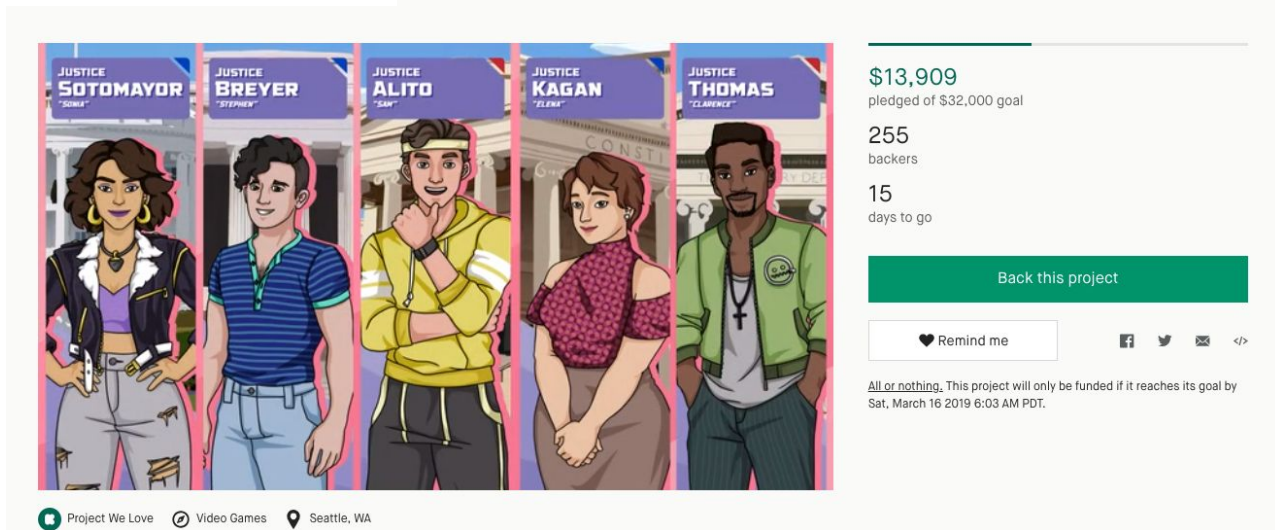
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Kickstarter Recommender - Overview

- Baseline Metric:
Failure

Supreme Courtship: Comedy, Adventure, JUSTICE!

Order in the Court! This comedy visual novel puts YOU on the Supreme Court! Befriend the Justices, argue cases, and solve a mystery!

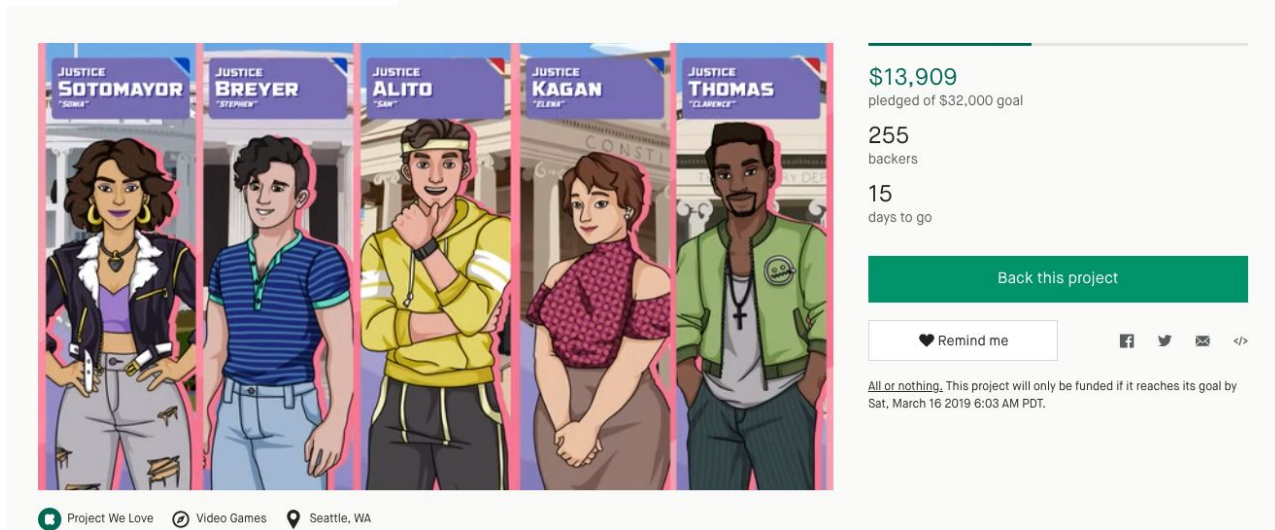


Kickstarter Recommender - Overview

- Baseline Metric:
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- Model Prediction:
67% chance
Success

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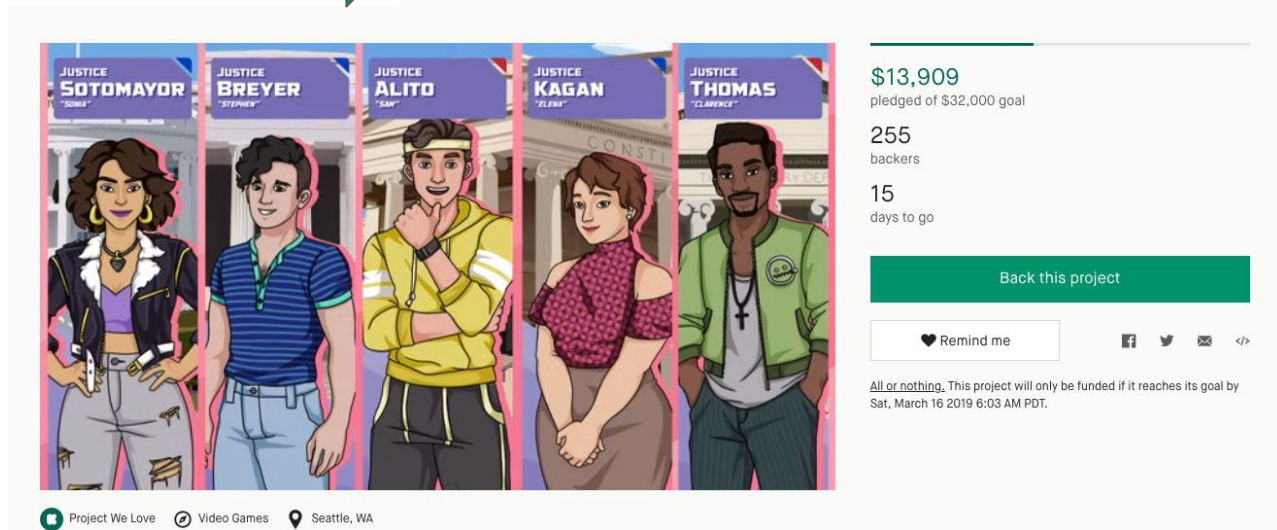
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Predictions - Baseline Metric vs. Random Forest Classifier

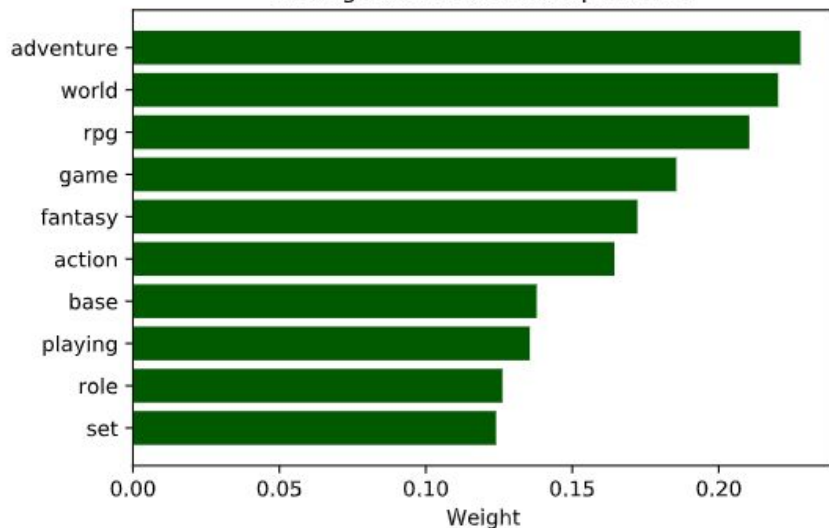
Prediction Metric	Baseline	RF Classifier	Improvement
Accuracy	0.865	0.947	 0.082
Precision	0.931	0.932	0.001
Recall	0.763	0.951	 0.188

Threshold for “Recommender Pool”: 35%-70% chance of success

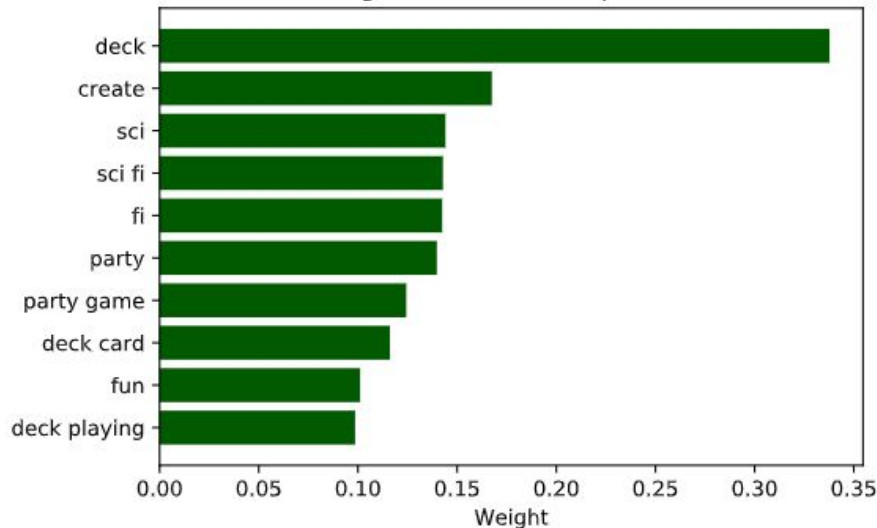
Recommendations - Method

- After preprocessing text, used TF-IDF and LSA for topic modeling
- Identifying niche categories beyond Kickstarter's sub-categories

Strongest terms for component 3



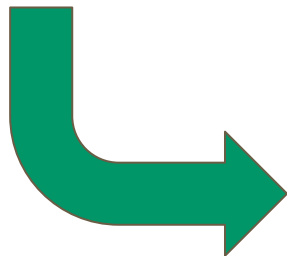
Strongest terms for component 16



Recommendations - Results

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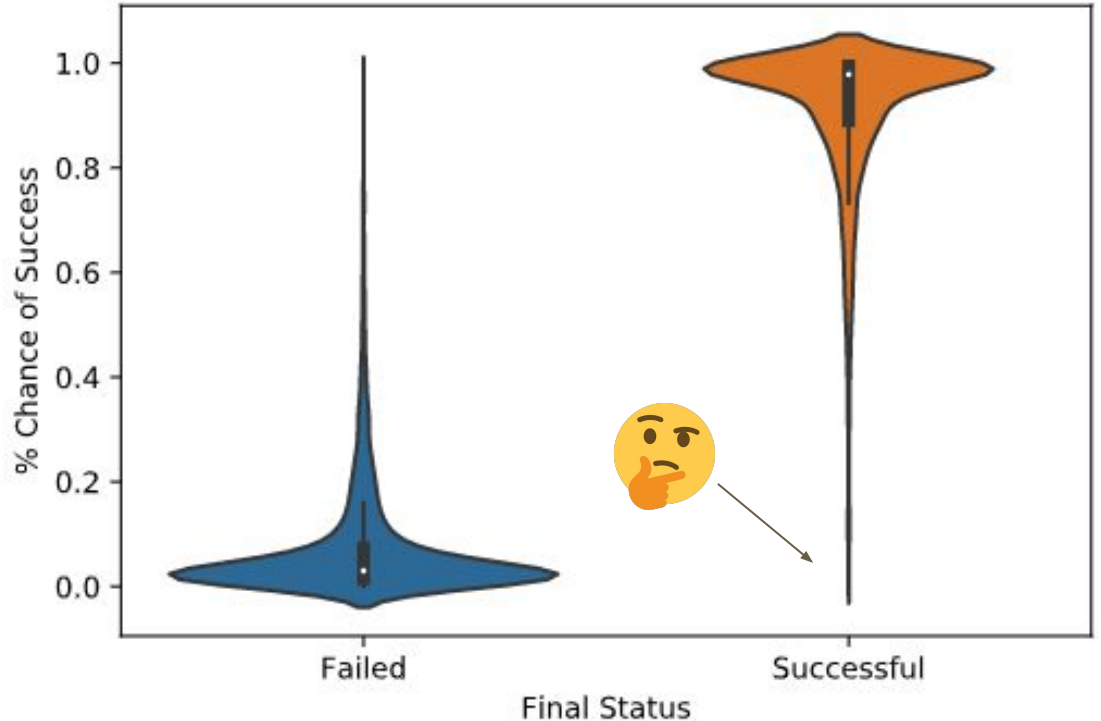


The Stroke Of Midnight - 'A detective themed mystery visual novel with a diverse LGBT-inclusive cast, an adult setting and a compelling action-heavy plot.'

Cosine Similarity - 0.89

Future Work

- A/B testing
- Clustering on text data
- Promote project across categories
- **Fraud detection**



Thank You!

Appendix

Saving Stats of Models - X_1

F1 test score is 0.9049429657794678

Accuracy test score is 0.9153259949195597

precision test score is 0.8717948717948718

recall test score is 0.9407114624505929

AUC test score is 0.9185038793734446

Saving Stats of Models - X_2

See notes below for ranked feature importances

F1 test score is 0.9322191272051995

Accuracy test score is 0.9381879762912786

precision test score is 0.9194139194139194

recall test score is 0.9453860640301318

AUC test score is 0.9388468781689121

Saving Stats of Models - X_3

F1 test score is 0.9116809116809116

Accuracy test score is 0.9212531752751905

precision test score is 0.8791208791208791

recall test score is 0.9467455621301775

AUC test score is 0.9244113567327445

Saving Stats of Models - X_4

F1 test score is 0.9417206290471785

Accuracy test score is 0.9466553767993227

precision test score is 0.9322344322344323

recall test score is 0.9514018691588785

AUC test score is 0.9470631636816064

See notes below for ranked feature importances

Saving Stats of Models - X_5

Logistic:

F1 test score is 0.6047471620227038

Accuracy test score is 0.6756985605419137

precision test score is 0.5366300366300366

recall test score is 0.6926713947990544

AUC test score is 0.6794491538639071

RF:

F1 test score is 0.5714285714285714

Accuracy test score is 0.6621507197290432

precision test score is 0.48717948717948717

recall test score is 0.6909090909090909

AUC test score is 0.6695751484696209