So you want to release a game on Steam...

Julia Tsaltas
Aug 27, 2021

Video game distribution service by Valve

Many of the same games also available on consoles but for computer playability

Some exclusives, not many

Offers community networking for user interactions on each game's home page.

jtsaltas

WISHLIST (39)

Your Store   New & Noteworthy   Categories   Points Shop   News   Labs

search

GIFT CARDS
Now Available on Steam

RECOMMENDED
By Friends
By Curators
Tags

DISCOVERY QUEUES
Recommendations
New Releases

BROWSE CATEGORIES
Top Sellers
New Releases
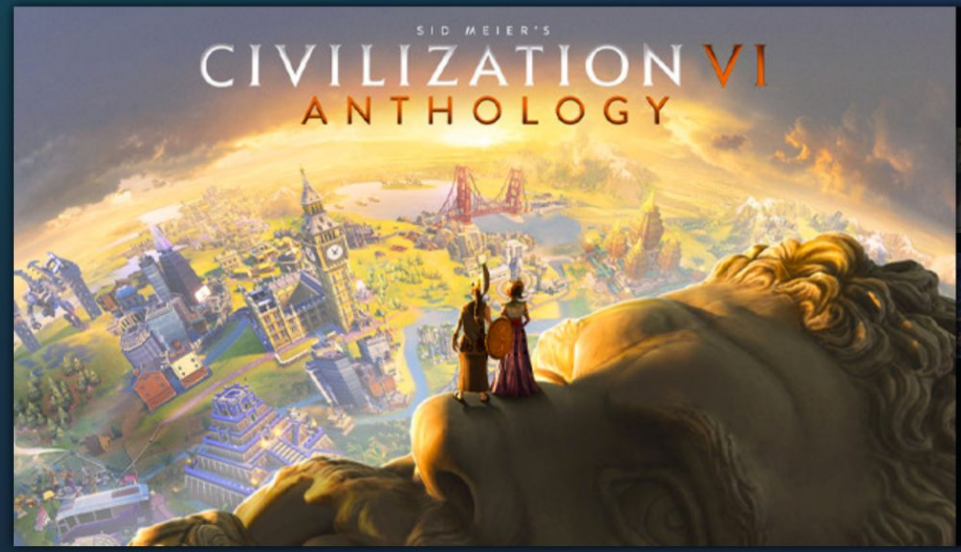Upcoming
Specials
Virtual Reality
Controller Friendly

BROWSE BY GENRE

FEATURED & RECOMMENDED

SID MEIER'S
CIVILIZATION VI
ANTHOLOGY

Sid Meier's Civilization® VI Anthology

Now Available

Top Seller

CDN$ 124.76

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STORE LIBRARY COMMUNITY JTSALTAS

All Games > Indie Games > Celeste

Celeste

Community Hub

This might have been a mistake.

CELESTE

Help Madeline survive her inner demons on her journey to the top of Celeste Mountain, in this super-tight platformer from the creators of TowerFall. Brave hundreds of hand-crafted challenges, uncover devious secrets, and piece together the mystery of the mountain.

RECENT REVIEWS: Overwhelmingly Positive (1,061)
ALL REVIEWS: Overwhelmingly Positive (37,045)
RELEASE DATE: 25 Jan, 2018
DEVELOPER: Extremely OK Games, Ltd.
PUBLISHER: Matt Makes Games Inc.

Popular user-defined tags for this product:

Precision Platformer Difficult Pixel Graphics Indie +

Add to your wishlist Follow Ignore

View Your Queue

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RECOMMENDED

By Double Fine Productions   29 January, 2018

"A Day of the Devs game. Top tier razor sharp difficult platforming with a perfect difficulty curve. As well as beautiful visuals, chill tunes, and a surprisingly engaging story to pull you through it."

Discuss this review

Buy Celeste

CDN$ 21.99   Add to Cart

Buy Celeste + OST

Includes 2 items: Celeste, Celeste Soundtrack

Bundle info   CDN$ 32.28   Add to Cart

CONTENT FOR THIS GAME

Browse all (1)

Celeste Soundtrack   CDN$ 10.29
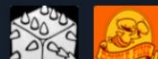
Is this game relevant to you?

✔ Because you've played games tagged:

Indie   Adventure   Atmospheric
Singleplayer   Puzzle Platformer
Platformer   Story Rich   2D
Great Soundtrack

✔ Players like you love this game.

✔ User reviews: Overwhelmingly Positive

✔ Recommended by Curators you follow

So why release a game on Steam?

- ***Established*** gaming distribution platform since 2003 with many users

- ***Lower barrier to entry*** to publish than on console (XBox, PlayStation, Switch)

- ***More exclusive*** than sites like itch.io (free-for-all host and sales platform)

- Great place to ***measure success*** before committing to porting to other platforms

- Only requires players to have a ***computer/laptop*** to play (mostly PC but many mac and linux too)

So why NOT release a game on Steam?

- There are so many games to compete with

- It's difficult to find new releases unless they make it to the Store page

- The recommender tools are lacking

→ *but that's life…*

→ *does the world need another Civilization?*

→ *the link just gives 1 recommendation…*

So you want to release a game on Steam...
now what?

As a new indie developer, what characteristics on Steam will increase the likelihood of your game achieving success?

Steam Customer Analysis

Who's buying what?

Predict Success Based on Tags

What are the chances that I can sell 20,000+ copies if I make a <u>single-player</u>, <u>action</u>-<u>adventure</u> game for <u>pc</u> and <u>mac</u>, release a <u>video trailer</u>, and have a few steam <u>achievements</u>?

Game Recommender

What other games out there are similar to the game I'm releasing?

Workflow

Datasets → EDA → Modelling → Predictions

Datasets

1) Steam Store Raw Data (uncleaned) by Nik Davis - Kaggle
   - Steam API, Steamspy API
   - 29,000+ games
   - Genre, developer, languages, tags, etc.
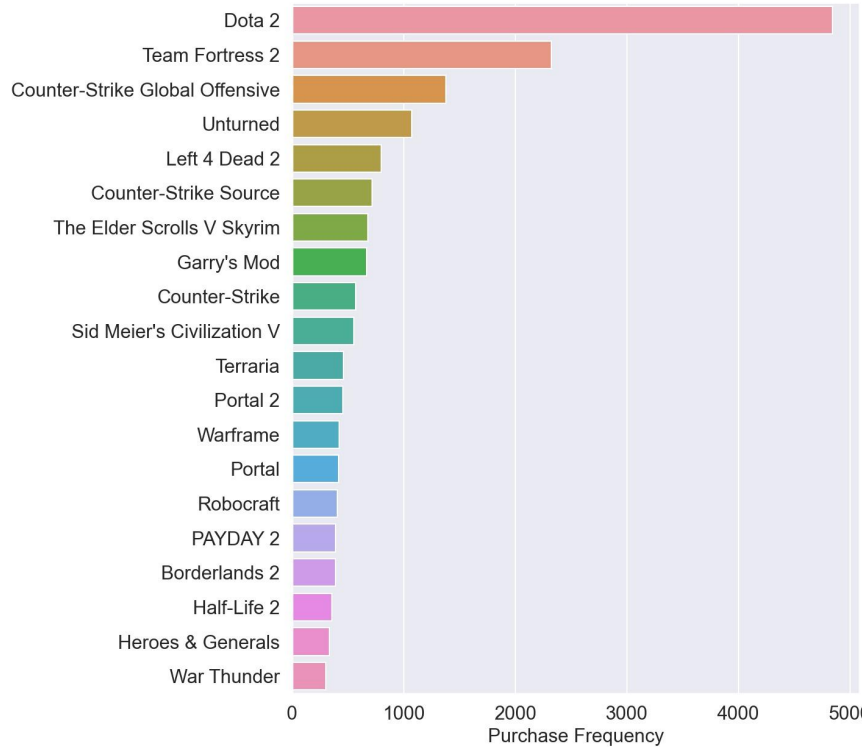
   Game

2) Steam Video Games by Tamber.com - Kaggle
   - Steam user data
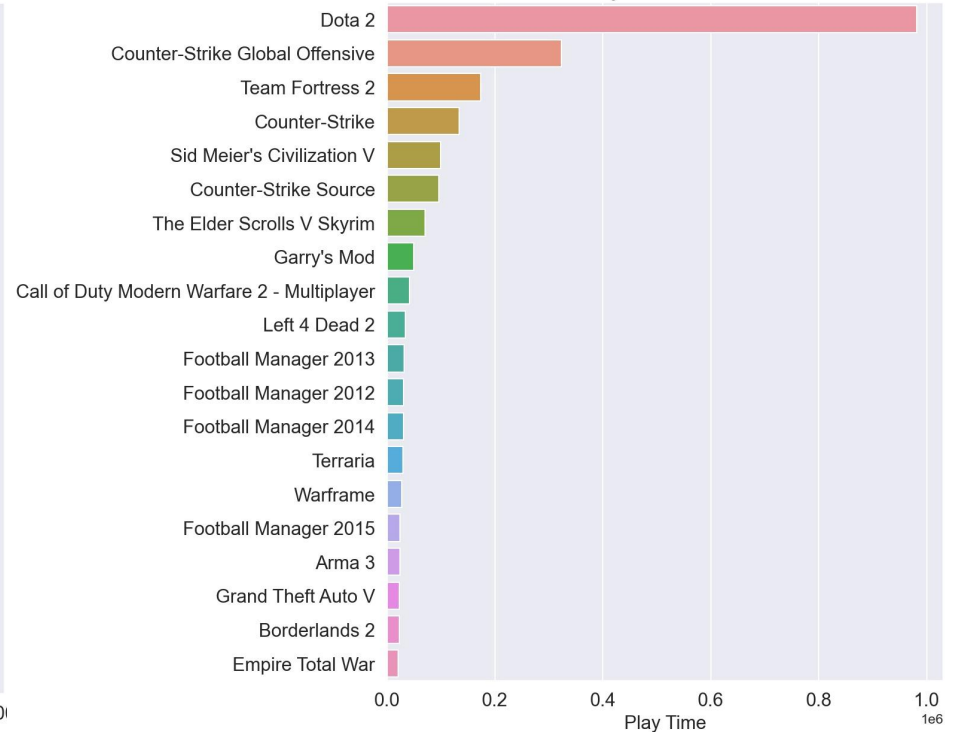   - 3600 games, 11350 users
   - Purchases, playtime

   User

Most Popular Games on Steam
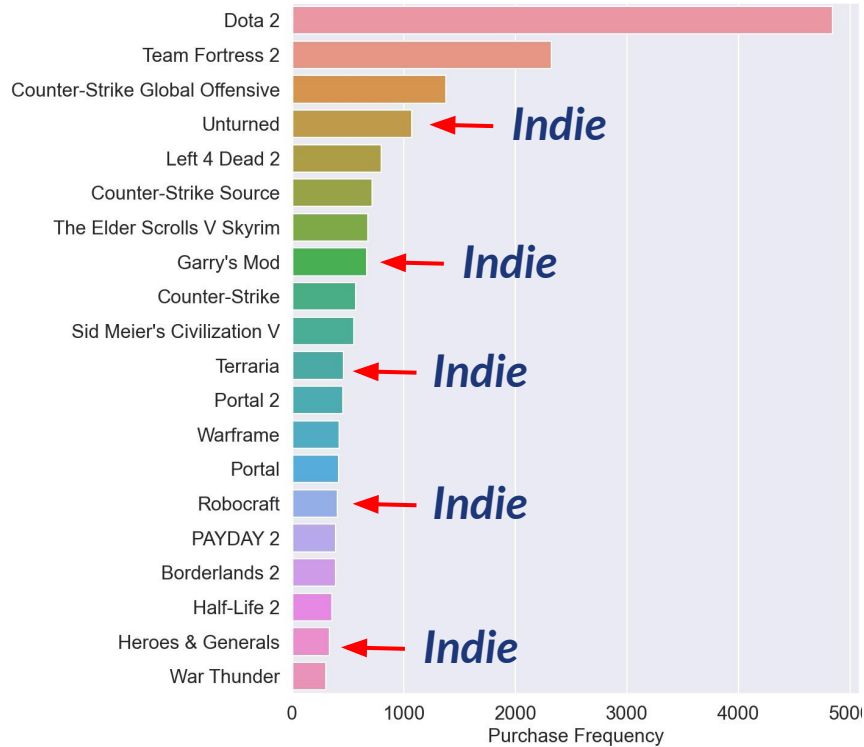

20 Most Purchased Games on Steam

20 Most Played Games on Steam

Data: https://www.kaggle.com/tamber/steam-video-games

Most Popular Games on Steam

20 Most Purchased Games on Steam

Dota 2
Team Fortress 2
Counter-Strike Global Offensive
Unturned ← *Indie*
Left 4 Dead 2
Counter-Strike Source
The Elder Scrolls V Skyrim
Garry's Mod ← *Indie*
Counter-Strike
Sid Meier's Civilization V
Terraria ← *Indie*
Portal 2
Warframe
Portal
Robocraft ← *Indie*
PAYDAY 2
Borderlands 2
Half-Life 2
Heroes & Generals ← *Indie*
War Thunder

0   1000   2000   3000   4000   5000
Purchase Frequency

20 Most Played Games on Steam

Dota 2
Counter-Strike Global Offensive
Team Fortress 2
Counter-Strike
Sid Meier's Civilization V
Counter-Strike Source
The Elder Scrolls V Skyrim
Garry's Mod ← *Indie*
Call of Duty Modern Warfare 2 - Multiplayer
Left 4 Dead 2
Football Manager 2013
Football Manager 2012
Football Manager 2014
Terraria ← *Indie*
Warframe
Football Manager 2015
Arma 3
Grand Theft Auto V
Borderlands 2
Empire Total War

0.0   0.2   0.4   0.6   0.8   1.0
Play Time   1e6

Indie Purchases

Total Purchases of Indie Games

Modelling

Steam Customer Analysis	*Compares customer genre preferences* Datasets: Game Genres + User Data Transformer: Principal Component Analysis KMeans Clustering: 3 clusters
Indie Success Prediction	*Predicts probability of 20,000+ based on only user tags* Datasets: Game Data Categories: <20,000 (70%), >20,000 (30%) Model: AdaBoost, 85% train, 84% test,
Game Recommender	*Predict new games based on other user preferences* Datasets: User Data Technique: Cosine Similarity

Steam Streamlit App

https://steam-streamlit-app.herokuapp.com/

Final Thoughts

- Segmentation happened based on total purchases, not type of purchase.

- Prediction strongly based on if a game has a trailer and sometimes demo

But why?

➢ Promotion of a game mostly happens off Steam, so players click on links that bring them to the main page to check out the trailer.

Improvements and Next Steps
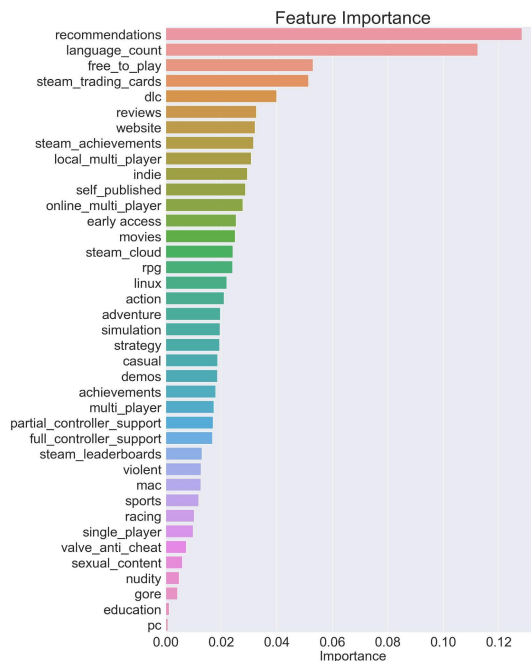
- Try to gather purchase quantity information rather than categories.

- Improve recommender system by referring based on percentage of game completed of similar games rather than just purchases.

- If user data can be obtained for the app store, repeat customer segmentation for a more diverse portfolio of games

Now go on and release the next big hit!

Appendix: Overall Feature Importance

Appendix: Success Prediction Metrics

Confusion Matrix

	Predicted False	Predicted True
Observed False	3872	988
Observed True	1764	3208
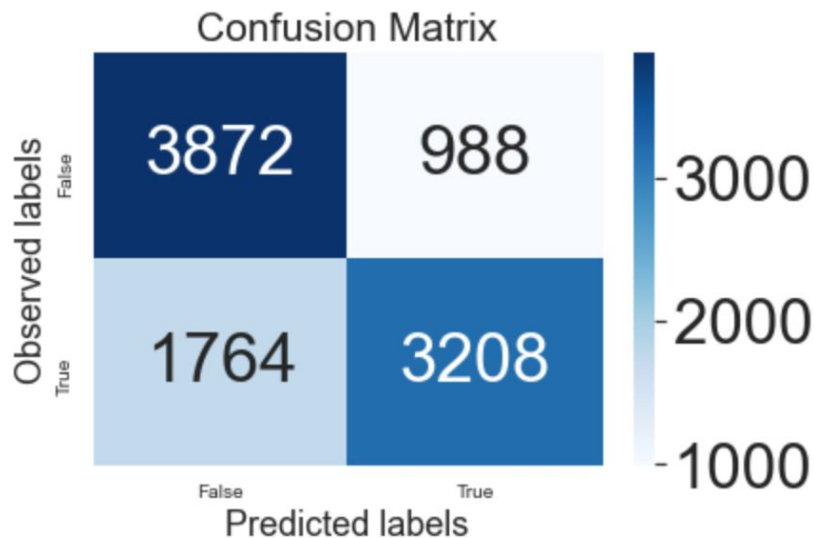
Specificity: 0.7967 (Correct Negatives)

Sensitivity: 0.6452 (Correct Positives)

Precision: 0.7645 (Correct Predicted Positives)

Misclassification: 0.2799

Accuracy: 0.7201

ROC AUC Score: 0.7641 (Sensitivity vs Specificity)

Appendix: Game Recommender DataFrames

user	5250	76767	86540	144736	181212	229911	298950	381543	547685	554278	...	309228590	309255941	309262440	309265377	309404240
game																
007 Legends	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
0RBITALIS	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
1... 2... 3... KICK IT! (Drop That Beat Like an Ugly Baby)	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
10 Second Ninja	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
10,000,000	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
rymdkapsel	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
sZone-Online	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
the static speaks my name	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN
theHunter	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	1.0	NaN	...	NaN	NaN	NaN	NaN	NaN
theHunter Primal	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	...	NaN	NaN	NaN	NaN	NaN

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Appendix: Game Recommender DataFrames

game	007 Legends	0RBITALIS	1... 2... 3... KICK IT! (Drop That Beat Like an Ugly Baby)	10 Second Ninja	10,000,000	100% Orange Juice	1000 Amps	12 Labours of Hercules	12 Labours of Hercules II The Cretan Bull	12 Labours of Hercules III Girl Power
game										
007 Legends	1.0	0.000000	0.0	0.000000	0.0	0.0	0.0	0.0	0.0	0.0
0RBITALIS	0.0	1.000000	0.0	0.408248	0.0	0.0	0.0	0.0	0.0	0.0
1... 2... 3... KICK IT! (Drop That Beat Like an Ugly Baby)	0.0	0.000000	1.0	0.000000	0.0	0.0	0.0	0.0	0.0	0.0
10 Second Ninja	0.0	0.408248	0.0	1.000000	0.0	0.0	0.0	0.0	0.0	0.0
10,000,000	0.0	0.000000	0.0	0.000000	1.0	0.0	0.0	0.0	0.0	0.0

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