

Indie Game Recommendation System

Zachary Cohen's Capstone Project
Sprint 1

Statistics Sources

- [Konvoy](#) (gaming venture capital firm)
- [Rocket Brush Studio](#) (game art studio)
- [Statista](#) (some sort of data broker)

Overview

Who cares about video games?

Gaming industry: at a glance

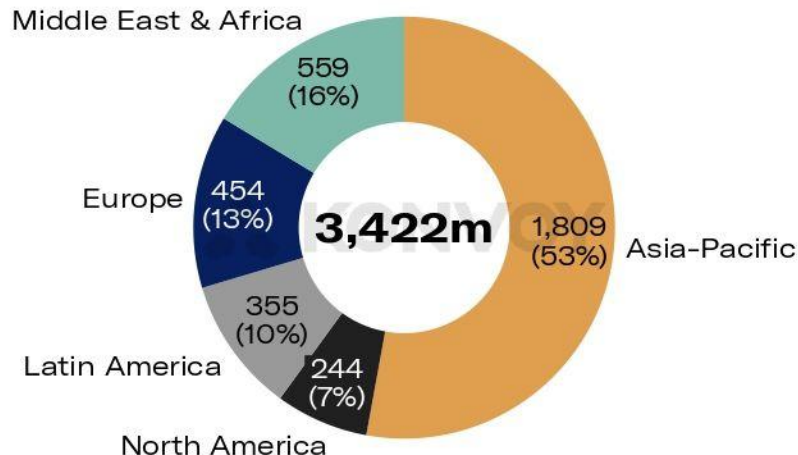
- **2024 market size:** \$188bn (+2.1% YoY)
- **Public markets:** leading public gaming ETFs up 22-36% YTD (vs S&P 500 = 21%)
- **Venture funding in Q3' 24:** \$517m across 92 deals (funding +1% QoQ, number of deals -14% QoQ)

Key Trends

- Epic sidesteps Apple in the EU, sues Google
- Discord launches Activities
- AI: Google <> Character.ai, Canva <> Leonardo.ai
- Savvy Games Group partners with Xsolla
- US Senate passes online child safety bills
- FTC sues TikTok for violating COPPA
- Keywords Studios goes private (\$2.8bn)
- Unity fully removes Runtime Fee

Source: CB Insights, Newzoo, public reporting, Drake Star

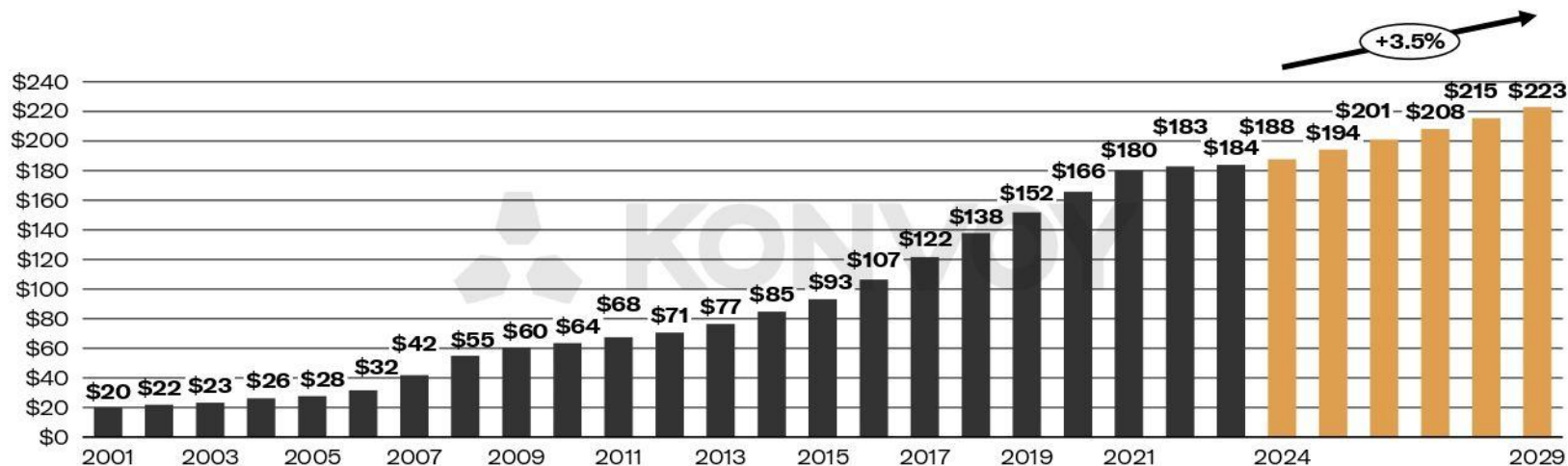
Total gamers in 2024 by region (millions):



Gaming is expected to be a \$188bn market in 2024

\$ in billions

Actual Projected



Source: IFPI, Newzoo, Arstechnica, MPAA, Mordor Intelligence, Konvoy



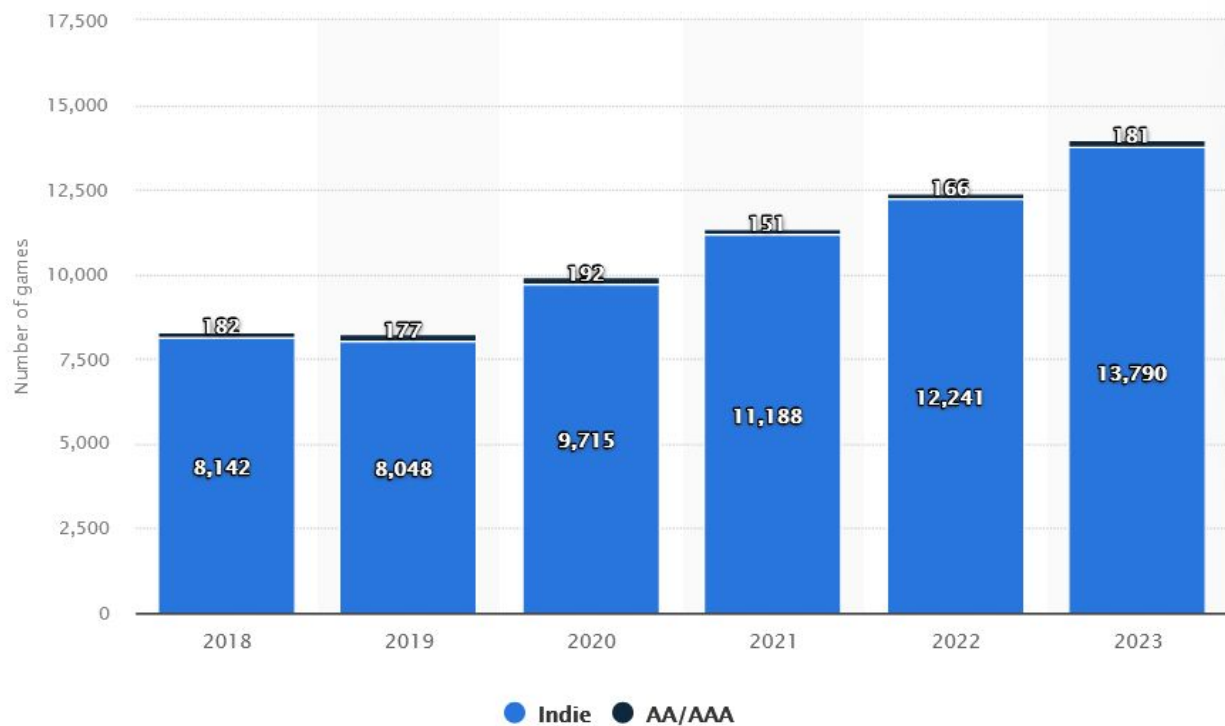
Problem Definition

There are too many indie games on [Steam](#) (arguably the largest and most important online digital storefront for PC games), and it doesn't currently (in my opinion) do the best job recommending them.

Indie v.s. AAA

Feature	Indie	AAA
Budget	Limited, often self-funded	Large, often exceeding millions
Development Team	Small teams or solo developers	Small teams or solo developers
Marketing	Minimal, relies on word-of-mouth	Extensive, high-profile campaigns

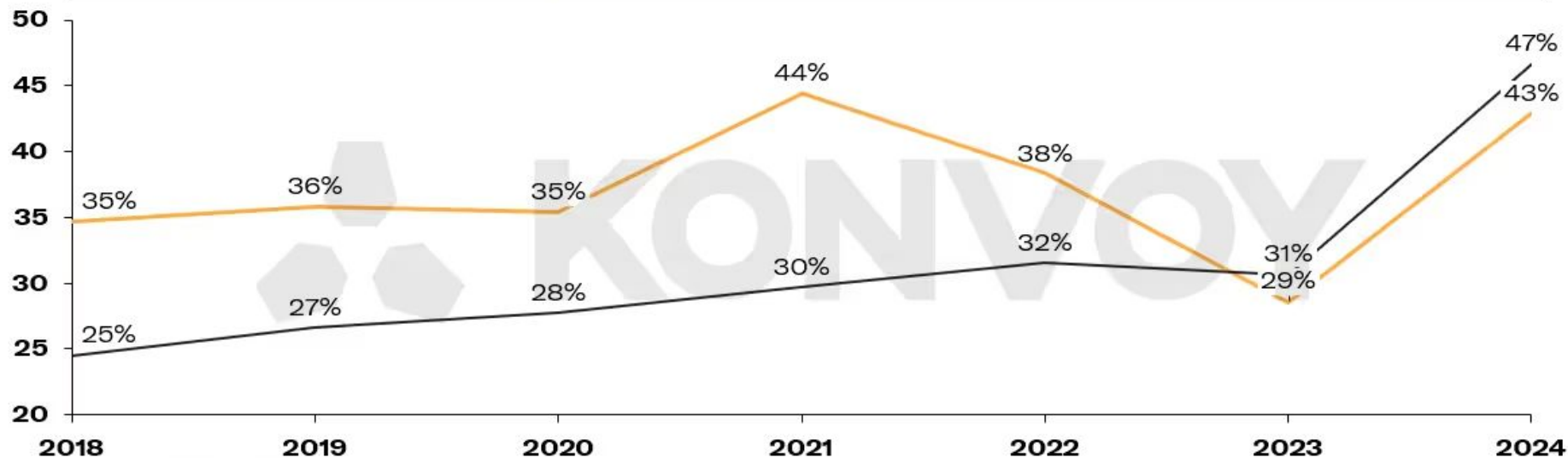
<https://rocketbrush.com/blog/aaa-aa-indie-games-distinct-paths-in-game-development>



<https://www.statista.com/statistics/1411839/number-games-released-steam-developer-type/>

Indie game revenue on Steam

— Indie Games as % of Games >\$10M Rev — Indie Games as % Steam Rev



Source: VG Insights

<https://www.konvoy.vc/content/the-era-of-the-indie-game>

Who Cares About Indie Games?

- Indie developers
- Game storefronts

Proposed solution

<https://store.steampowered.com/app/105600/Terraria/>

(Recommendation system based on publicly available Steam store information and game reviews)

Impact approximation

132 M active users/month * 1% * \$20 =

\$264,000/month per percent of monthly users who purchase a game

\$79,000/month (30%) to Steam

\$184,800/month (70%) to indie developers

(Monthly active users from 2021 data by [Statista](#))

Data

Review JSON information

- Review (good/bad)
- Review text
- Review votes
- User information
 - Id
 - Game playtime
 - At review
 - Total
 - Past two weeks

Store page JSON information

- Genre
- Price
- Hardware compatibility

Other data

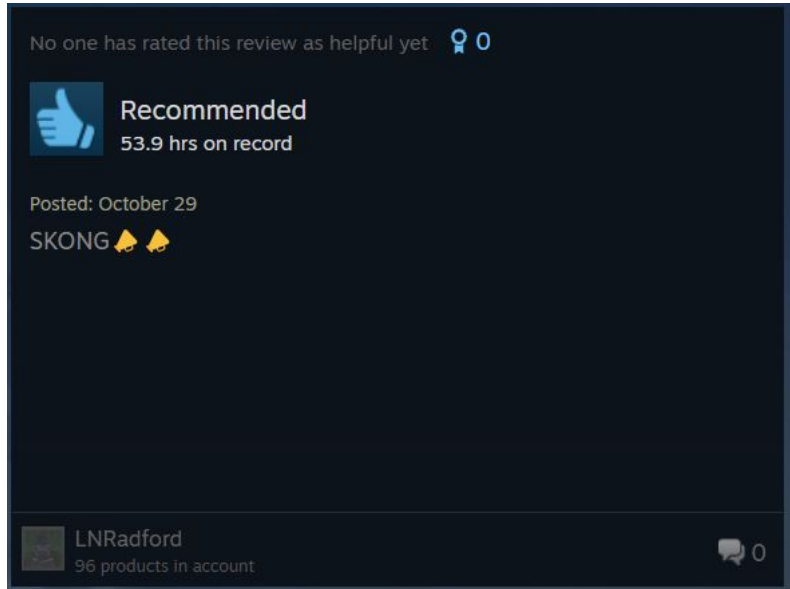
- Steam curators

Considerations

Plans (Past & Present)


1. Use steam API to get game stats for users
 - a. Issue: Violated API TOS
2. Use web scraping to get steam stats for users with public stats
 - a. Issue: Prohibitively slow
3. Use unofficial API to get reviews and associated metadata
 - a. Issue: None?


Quality concerns





- Reviews lack usable text
- Some reviews are jokes


Quality concerns


No one has rated this review as helpful yet  0

 **Recommended**
53.9 hrs on record



Posted: October 29
SKONG 🚩 🚩

 LNRadford
96 products in account  0

No one has rated this review as helpful yet
1 person found this review funny  0


 **Recommended**
1.1 hrs on record


Posted: October 30
RAHHHHHHHHHHH;ADSLKFJ;ASLDKJF;ALSDFJ;ALSDK

 rosxlyn  0

Quality concerns

No one has rated this review as helpful yet

1 person found this review funny  0

1 person found this review funny  0



Recommended

18.1 hrs on record

Posted: October 26

[illegible]

?

marissabuttner



Quality concerns

No one has rated this review as helpful yet 0

2 people found this review helpful

1 person found this review funny 0



Recommended

18.1 hrs on record

Posted: October 26

play itplay itplay itvvvvvplay itplay itplay itplay itplay itplay itp
itplay itplay itplay itplay itplay itplay itplay itplay itplay itplay it
itplay itplay itplay itplay itplay itplay itplay itplay itplay itplay it
itplay itplay itplay itplay itplay itplay itplay itplay itplay itplay it
itplay itplay itplay itplay itplay itplay itplay itplay itplay itplay it



marissabuttner



donovan » Reviews » Hollow Knight

449 people found this review helpful

72 people found this review funny



Recommended

0.0 hrs last two weeks / 57.2 hrs on record (45.5 hrs at review time)

Posted: Jan 18, 2023 @ 7:08pm



Was this review helpful?

Yes

No

Funny

Award

Comments are disabled for this review.

1 person found this review helpful

2 people found this review funny  0



Not Recommended

66.3 hrs on record

Posted: October 31

there is no official body pillow of the main character 0/10



samaell7078



?

marissabuttner

» Reviews » Hollow Knight

helpful



8



2



14



20

57.2 hrs on record (45.5 hrs at review time)



No



Funny



Award



Comments are disabled for this review.

Progress

Finishing today:

- JSON download
 - Store info for 50k games
 - 10,000,000 reviews (estimate)

Next steps:

- Move reviews to some kind of database
 - May have to ditch pandas/csv format
- Basic EDA
 - Reviews per game
 - Reviews per user

Thank you!