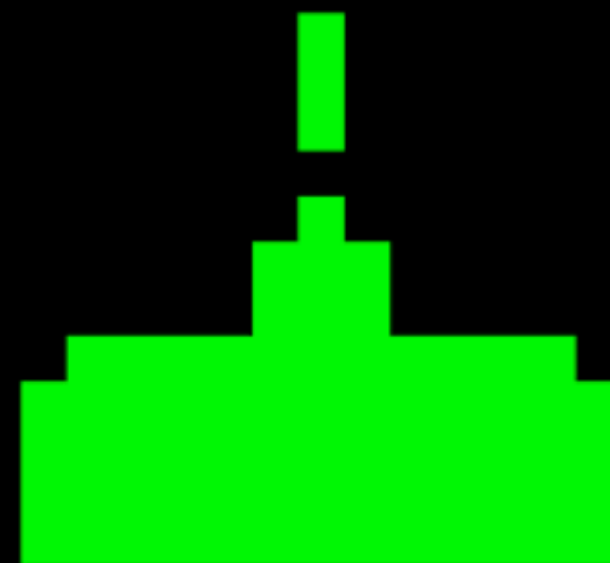# Steam Game Store Analysis

Steam 2

The Redux

Michael Harnett
6/25/21
Metis NLP and Unsupervised Machine Learning Module

Opportunity

By analyzing the reviews left for top-rated games, developers can learn the driving forces behind a game's success.

In addition to greater insight, Steam can use the extracted topics to recommend a wider variety of games to its users.

Data

- A combination of Selenium and Beautiful Soup was used to create a list of the top 30 games for each genre, and their game ID

- The list of IDs were then used to retrieve the top 100 reviews for each game from the SteamWorks API

Cleaning the Data

'Just a few years ago all the cheater\'s capabilities was spawning UFOs, changing weather, caging every play
er in session and other "non-harmful" annoying stuff. But today I\'ve met cheater chasing me across [u]priva
te[/u] sessions and even solo heist.\nIt\'s getting worse and worse with cheaters situation in GTA Online an
d Rockstar did nothing useful to fix it. There\'s known information about cheaters extracting your IP via ga
me for DDoS attacks and even finding your location.\nThis shit is not fun anymore, it\'s straight up terrify
ing and dangerous.\n[i]GTA Online has to be abandoned and never be played again.[/i] I personally don\'t wan
t to launch it ever again.\n\nOh, the Story Mode (singleplayer) of this game is cool. Worth buying\n\n\n\n*R
eview update*\n\nI think I should mention few thing:\nYes, Online is fun and interesting\nYes, it\'s very un
likely that you meet a cheater chasing you, extracting your location, overheating your computer or blaming y
ou in cheating which will lead to your account banning\nYes, if there was no such dangerous cheaters in Onli
ne, I would definitely recommend buying and playing it\n\nBut your luck may end one day and you will meet a
cheater making something from above to you. Before buying the game or playing Online part of it — just be aw
are of what can happen, don\'t let it be a surprise for you'

'BURN THE HERETIC.\nKILL THE MUTANT.\nPURGE THE UNCLEAN.\nIT IS BETTER DIE FOR EMPEROR THAN TO LIVE FOR YOUR
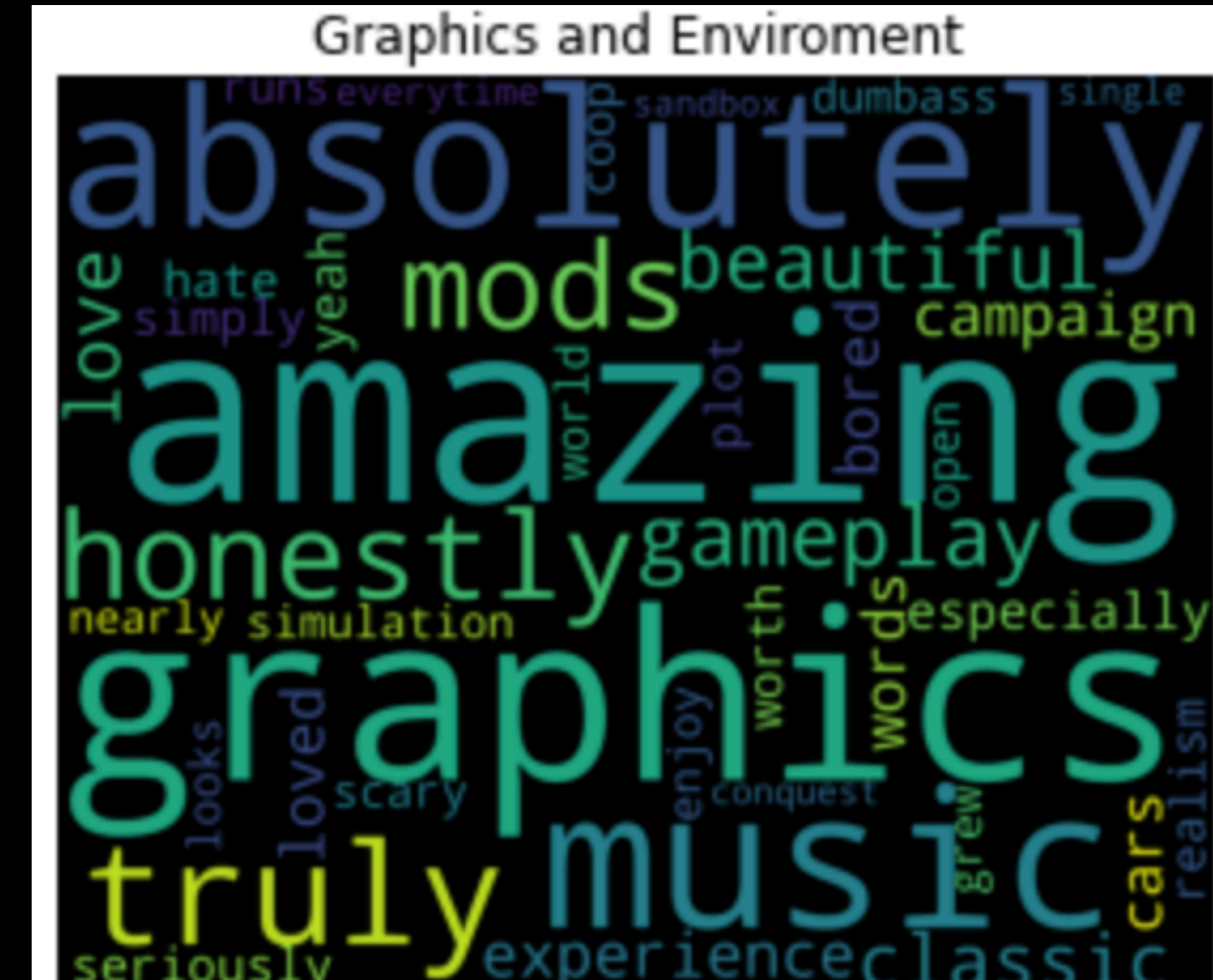SELF!'

Topic Modeling
TF-IDF with NMF

- Final model has 11 topics, 9 of which are viable

- Gameplay and Experience

- Emotional Response

- Multiplayer

- Graphics and Environment

- Catch-all / Awesome

- Time Filler

- Characters and Plot

- Masterpice/Impressive

- Learning Curve/Time Investment

- Difficult/Challenging

Topic Examples

Recommending Games

```
test_query(['cool characters'])
```

```
Summer Pockets
The Witcher: Enhanced Edition Director's Cut
To the Moon
BioShock Infinite
To the Moon
```

```
test_query(['tedius and annoying'])
```

```
Darkest Dungeon®
Celeste
Age of Empires II: Definitive Edition
Game Dev Tycoon
Crusader Kings III
```