GAME ALGORITHM

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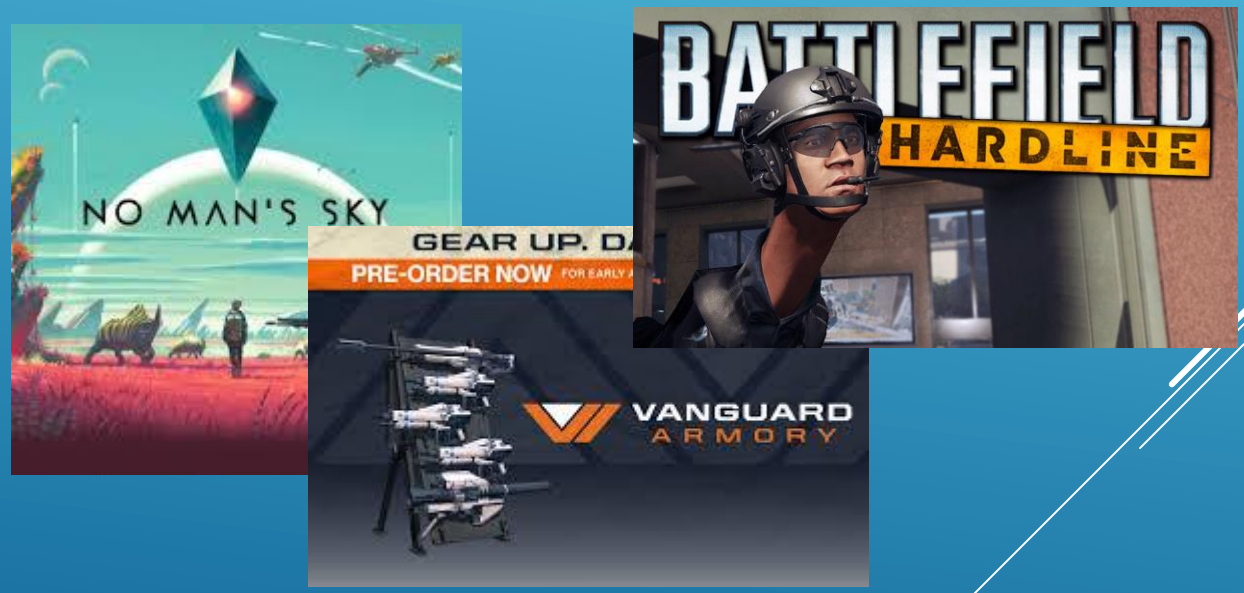
INTRODUCTION

- We've probably all gotten buyer's remorse at least once
- Becoming increasingly common in video game market
  - Pre-Order Bonuses
  - Review Embargoes
  - Release Day Bugs
  - EA



ABSTRACT

- User will input a game, and some simple info about it, and the algorithm will determine whether the user should:
  - Purchase the game
  - Wait to purchase the game until the price drops/until more information is available
  - Consider other games similar to the one in question, or
  - Not purchase the game

METHOD

- Step 1: Enter game info
  - Genre
  - Critical Score out of 10
  - User Score out of 10
  - Publisher Score out of 10
- Step 2: Compare game to other games in user's library (same genre)
  - Convert into score out of 10
- Step 3: Analyze average amount of hours played in that genre
  - Convert into score out of 10
- Step 4: Average the scores
- Insufficient data = 5/10

WHERE DOES AI COME IN?

- The game will be compared to the user's library based on two parameters:
  - Genre
  - Hours Played
- Machine Learning algorithm will be used to linearly separate data
  - How many games in library are same genre as game in question
  - How many hours have these games been played in total compared to games of other genres
- Game will be scored on a scale of 1 to 10, which will be averaged with the other scores
  - 1 = Completely dissimilar from library and/or barely any user playtime in this genre
  - 10 = Same genre as most of library and/or majority of user playtime in this genre

FINAL SCORE

- The average of the scores from the previous steps
- The final score will be determined as follows:
  - 0-2 = User should not purchase game
  - 3-4 = User should reconsider desire to purchase game
  - 5-6 = User should wait for reduced price/explore other similar titles
  - 7-9 = User should purchase the game

DATA

- My Steam library (~70 games)
- My friends' Steam libraries (31 friends with ~10-150 games each)
- Still not enough? Randomly generate data

EXAMPLES/EXPERIMENTS

- Final Fantasy XV just came out. Is it worth buying? Let's find out:

- Genre: RPG
- Critical Score: 8/10 (*Source: Metacritic.com*)
- User Score: 8/10 (*Source: Metacritic.com*)
- Publisher: Square Enix, 7/10 (*Source: Metacritic.com*)
- Library: Out of the 70 or so games I own, only about 8 are RPGs, 1.1/10*
- I've played these 8 games collectively about 75 hours, 7.5/10*
- Final Score: 6.32/10
- Consensus: I should probably wait for the game to go on sale.

*these are stand-in examples, actual scores will be determined by PLA

EXAMPLES/EXPERIMENTS

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- Mafia III
  - Genre: Action
  - Critical Score: 7/10
  - User Score: 5/10
  - Publisher Score: 7/10
  - Library: The majority of games I own are in the Action genre, 8/10
  - Hours played: Hundreds, 10/10
  - Final Score: 7.4

EXAMPLES/EXPERIMENTS

- Forza Horizon 3
  - Genre: Racing
  - Critical Score: 9/10
  - User Score: 8/10
  - Publisher Score: 7/10
  - Library: I don't own any racing games, 0/10
  - Hours played: 0/10
  - Final Score: 4.8

CONCLUSIONS

- Algorithm appears to be heavily swayed by contents of user's library
  - Machine learning should result in more accurate results
- Current framework: pocket algorithm
- Python is hard
  - Still working on code
  - See picture ➔