ANALYZING PLAYER FEEDBACK IN STEAM REVIEW ACROSS GAME GENRES

SAFIRA NURUL IZZA

UNIVERSITI TEKNOLOGI MALAYSIA

Table of Content

CHAPTER 1 INTRODUCTION

CHAPTER1

INTRODUCTION

1.1 Introduction

Steam is a successful game distribution platform, known as the place with the largest online video game sales transactions. According to Lanier (2019), out of a total of one billion registered accounts, around 90 million are active users. Every week, more than a thousand new games are released on Steam, which influences many of the factors that customers consider when deciding to purchase a game (Urriza & Clariño, 2021). Figure 1.1 shows the Steam homepage, where player can access games by genre, category, system requirement, and many more. However, Steam's binary review system, namely "Recommended" and "Not Recommended," limits the detail of player feedback. Often, players convey mixed sentiments that are difficult for developers to understand, even though this is very important for improving the playing experience and player satisfaction.

Moreover, it is hard to dividing games into genres as expectations of a player depend on the genre. Some are made based on realistic graphics, some can be based on the storyline, and some of them can be based on accurate game mechanics only. What makes it even more challenging is that the Steam review system is less detailed, and developers cannot analyse exactly which specific aspects that players like or dislike.

To overcome this research gap, this study applies a sentiment analysis approach and strains to derive further understanding from players' feedbacks. This way, game designing and development can be done with consideration of particular needs and preferences in each category. Therefore, this study proposes a computational-based method to identify trends and patterns that may be difficult to capture with conventional analysis.

Figure 1.1: Steam Home Page

1.2 Problem Background

Steam reviews are the primary way for game developers to understand what their customers think of their games. However, the binary technique used by Steam does not capture the complexities of how players feel. For example, a favorable review could simply say "It's okay, nothing special," and a negative review could say "Great concept, but too many bugs.". This lack of detail makes it difficult for creators to fully evaluate how their game is regarded, especially across genres. For instance, graphics, storyline, or control schemes, may be crucial features in one genre but insignificant in others. Lack of information about these genre preferences means that developers may miss out on ideas of how their applications could be better. Because players' expectations vary by genre, it's critical to go beyond review counts

However, the huge amount of review data generated annually makes it undeniably impractical to analyze all the feedback manually. For this reason, the utilization of automatic tools is mandatory in aiding with the extraction and processing of meaningful data from player reviews and feedback as a scalable approach to improving on subsequent games.

1.3 Problem Statement

In particular, the binary Steam review system is very limited, it allows offering only very general information about the player's attitude toward the game, it is either liked or disliked. Contemporary research does not pay much attention to the variation in the arrangements of the reviews by genre, which poses challenges to developers due to the lack of knowledge of the players' preferences across genres. Therefore, the intention of this study is to fill this gap by examining the sentiment trends of the players' reviews as a way of providing more information to game developers. More so, it aims at describing how various game genres are likely to be perceived, as well as establishing key features that would define sentiment, as well as any patterns that are credible in supporting development concerns.

1.4 Research Question

1. How can sentiment analysis of Steam reviews provide a deeper understanding of player feedback?

2. How does player feedback differ across various game genres based on reviews?

3. What specific elements of gameplay (e.g., story, graphics) do players tend to highlight in positive and negative reviews across game genres?

1.5 Aim and Objectives

The aim of this study is to examine the relationship between player feedback and game genres on Steam, uncover significant trends in review sentiments, and offer actionable recommendations for developers to enhance player satisfaction.

The objectives of these research are:

(a) To analyse the proportion of positive and negative reviews within each genre.

(b) To identify trends in player feedback across genres and provide actionable insights.

(c) To explore the relationship between specific game elements and player sentiments.

1.6 Scope of Study

This study employs sentiment analysis to evaluate the emotional tone and content of Steam reviews across five selected genres: Action, RPG (Role-Playing Game), FPS (First-Person Shooters), Strategy (Real-Time/Turn-Based), and Indie. Each genre is defined as follows:

1. **Action:** Action games emphasize fast-paced gameplay that requires physical challenges such as hand-eye coordination and quick reflexes. They often feature combat, platforming, or puzzle-solving elements and can overlap with other genres like action-adventure games (G2A.COM Editorial Team, 2024).
2. **RPG (Role-Playing Game):** Role-playing games allow players to assume the roles of characters in a fictional setting, often focusing on story-driven progression, character customization, and decision-making that impacts the game's world and narrative (Wieland, 2024).
3. **FPS (First-Person Shooters):** FPS games involve weapon-based combat viewed through the eyes of the player character, focusing on graphical fidelity, immersive environments, and gameplay mechanics that simulate combat scenarios (Sandmann, 2024).
4. **Strategy:** Strategy games require players to think critically and plan ahead to achieve objectives, often involving resource management, tactical combat, and long-term planning. These games can be categorized into turn-based or real-time strategies (Wakeham, 2024).

5. **Indie:** Games developed by individuals or smaller teams without the financial support of a large publisher, often characterized by innovative gameplay and unique artistic styles (as discussed in "The Rise of Indie Games," Patel, 2022).

Data will be sourced from five games within each genre, focusing on reviews written in English. The total dataset consists of 100,000 reviews to ensure robust analysis and meaningful conclusions. The study will utilize a combination of exploratory data analysis (EDA) and machine learning techniques to extract meaningful patterns and trends from the dataset. Advanced sentiment analysis models, such as VADER and BERT, will be employed to achieve high accuracy in detecting player sentiments.

1.7 Significance of Research

The study will try to fill the literature on differences in game genres and types of feedback received from players. Other than binary review systems, this study gives deeper insights into player preferences by genre. This approach enables developers to aim directly at what players mostly need, according to their feedback. For instance, since FPS players are more concerned with graphic quality and resolution than the storyline, by investing more into enhancing those factors, they create a far better experience for players.

This study also develops a novel method for the analysis of a large corpus of player reviews and game-related textual data that can easily be applied in other contexts or settings. The findings of this study enrich not only basic data but also provide a better theoretical understanding of the factors affecting player sentiment. Therefore, this research serves as an important reference for the developer and sentiment analysts of the game industry to make the development data-driven.