In-Game Economy Analysis (TBD)

(COMP3125 Individual Project)

\*Note: Do not used sub-title

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*Abstract*—Project for Comp3125, this document covers documentation and reasoning behind trends within an in-game economy. The game is Minecraft, within a Server Named “Hypixel”, and a particular game-mode called ‘Skyblock’ *\*CRITICAL: Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract*. (*provide a short abstract*)

Keywords— Hypixel Skyblock Economy, In-Game Economy, Market Trends, Investment Strategies, Economic Sustainability, Virtual Markets, Player-Driven Trends

# Introduction (*Heading 1*)

Provide an introduction of your topics. Make sure you include the following part. What’s your topic? Why is it important or interesting? What’s the current research/results in this area. Include necessary citation.

Draft: An engaging pastime of mine has been playing video games, particularly dedicating hundreds of hours to understanding the intricacies of in-game economies. One game that holds a special place in my heart is *Hypixel Skyblock*, a game mode within the widely known *Minecraft*. This project focuses on the detailed in-game economy of *Hypixel Skyblock*. Like real-world markets, the prices of in-game items are influenced by a variety of factors. My objective is to draw meaningful conclusions and insights from this virtual economy, with potential applications to real-life economic principles. Currently, while there are some readily available datasets and information from community discussions or public websites [Sources to be filled][2][3], much of the decision-making within the game relies on intuition about what constitutes a worthwhile investment. Key factors affecting the economy include in-game events, the influence of prominent players and content creators, and the requirements of newly introduced content. Additionally, I plan to observe player-driven trends more closely to identify key moments or areas of both market activity, and in-game progress. These insights are the result of extensive research and personal experimentation, including tracking item trends and testing investment strategies. By considering these elements, I aim to provide a comprehensive analysis of the economy's status and offer recommendations for promoting its sustainability and future growth.

# Datasets

## Source of dataset (Heading 2)

In this part, you should introduce your datasets. Where did you download it? Is it a credible source? When were the datasets generated? How were the datasets generated by the creator? If you create the datasets, how did you generate it?

Example: The datasets were collected by me using the provided Hypixel API. I had automatically set up polling around every 2 hours. Each request returned Json which had specific information extracted (Meaning some data would be lost). There is further information inside the ‘API’ folder within the project. As for the credibility of the information, I am drawing conclusions based on the information directly reported from Hypixel, the server host. \*\*\* (To be edited)

## Character of the datasets

What’s the format and size of the datasets? What parameters/columns/rows/character and their units are included in this dataset. Use a table to explain this is recommended. Did you clean the data or convert any unit in the dataset? If so, what’s the formula/rule did you apply? Did you combine any datasets? If so, how do you combine them? Did you create any new category for analysis in the datasets? If so, what and how do you create?

Example: The CSV files contain information regarding popular items and items with relationships to in-game events. Each item has the name, average price (Rather than lowest offer, more consistent), quantity (Relating to consistency, supply and demand plus manipulation are important to consider as potential noise), the mayor (an in-game mechanic that closely relates to specific in-game money-making methods), and the time taken (Specifically, the time my computer received the information, likely to be delayed ~ 500ms). (To be edited)

# Methodology

In this part, you should give an introduction of the methods/model. First, what’s the method/model. What’s the assumption of this method/model. What’s the advantage/disadvantage of this method/model. Why did you choose it. What Python module or function do you apply to apply this method/model. Any optional input/extra work did you adjust to make the results better. If you have multiple methods, feel free to use subsection A., B. to separate them.

Example: Before you begin to format your paper, first write and save the content as a separate text file. Complete all content and organizational editing before formatting. Please note sections A-D below for more information on proofreading, spelling and grammar.

## Method A

Example: The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled.

*a**b* 

Note that the equation is centered using a center tab stop. Be sure that the symbols in your equation have been defined before or immediately following the equation. Use “(1)”, not “Eq. (1)” or “equation (1)”, except at the beginning of a sentence: “Equation (1) is . . .”

## Method B

* Bulletin 1
* Bulletin 2.
* Bulletin 3

Identify applicable funding agency here. If none, delete this text box.

## Method C

Example: The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled.

*a**b* 

Note that the equation is centered using a center tab stop. Be sure that the symbols in your equation have been defined before or immediately following the equation. Use “(1)”, not “Eq. (1)” or “equation (1)”, except at the beginning of a sentence: “Equation (1) is . . .”

An excellent style manual for science writers is [7].

# Results

In this part, you need to select a reasonable way to deliver the result of your topic. For example, equation or numerical results, or visualization of your result. You also need to provide a clear explanation of all results and how to understand the results. If there exist any unexpected results, please explain why or possible cause of this special result. You can use subsection A. B. to separate your results.

Example: After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

## Result A

Example: XXX

### For papers with more than six authors: Add author names horizontally, moving to a third row if needed for more than 8 authors.

### For papers with less than six authors: To change the default, adjust the template as follows.

#### Selection: Highlight all author and affiliation lines.

#### Change number of columns: Select the Columns icon from the MS Word Standard toolbar and then select the correct number of columns from the selection palette.

#### Deletion: Delete the author and affiliation lines for the extra authors.

## Results B

Example: Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: component heads and text heads.

## Results C

#### Positioning Figures and Tables: Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. Figure captions should be below the figures; table heads should appear above the tables. Insert figures and tables after they are cited in the text. Use the abbreviation “Fig. 1”, even at the beginning of a sentence.

1. Table Type Styles

| Table Head | Table Column Head | | |
| --- | --- | --- | --- |
| Table column subhead | Subhead | Subhead |
| copy | More table copya |  |  |

1. Sample of a Table footnote. (*Table footnote*)
2. Example of a figure caption. (*figure caption*)

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity “Magnetization”, or “Magnetization, M”, not just “M”. If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write “Magnetization (A/m)” or “Magnetization {A[m(1)]}”, not just “A/m”. Do not label axes with a ratio of quantities and units. For example, write “Temperature (K)”, not “Temperature/K”.

# Discussion

Every method/project has its shortage or weakness. Please discuss the unsatisfied results in your project. And discuss the feasible suggestions of future work to revise/improve your result.

Example: xxx

# Conclusion

In this part, you should summarize your project. What important results did you find for your topic and what’s the effect of this result on the real-world?

Example: xxx

##### Acknowledgment *(Heading 5)*

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression “one of us (R. B. G.) thanks ...”. Instead, try “R. B. G. thanks...”. Put sponsor acknowledgments in the unnumbered footnote on the first page.

##### References

The template will number citations consecutively within brackets [1]. The sentence punctuation follows the bracket [2]. Refer simply to the reference number, as in [3]—do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] was the first ...” Unless there are six authors or more give all authors’ names; do not use “et al.”. Papers that have not been published, even if they have been submitted for publication, should be cited as “unpublished” [4]. Papers that have been accepted for publication should be cited as “in press” [5]. Capitalize only the first word in a paper title, except for proper nouns and element symbols.

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