

Group Index : 28

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# Yu-Gi-Oh Newbie No More

## **A. Project Background**

Since we both love playing Yu-Gi-Oh Cards, we built a website which can help new players understand the meta decks in the past year, as our final project. Yu-Gi-Oh, being a world-famous trading card game, its card types include monster cards, spell cards, trap cards, all having distinct effects and attributes.

Throughout the year, Konami(company that owns Yu-Gi-Oh) hosts many competitions, ranging from grand-scale events like the World Championship, Regional Championships to more localized ones like the Spring Festival, Duelist Cup, and Campus League. In addition, prizes for top players of these competitions are popular and valuable, making many players try to be one of the best.

When it comes to competition, people care about those decks with higher winning rate more. A good deck makes us play better in the game and more likely to become top duelists. Therefore, making preparations in advance and studying gameplay / composition / strategy of meta decks become important. In this case, our website can help users quickly organize information about various competitive decks.

## **B. Dataset**

[Dataset link](#)

Our dataset includes :

1. Meta decks in 2022/10~2023/11, with their series' name, main tactics, types and amount.
2. Card dataset with cards rolled out by Konami before 2023 December, recording their own name, series' name and images
3. Banlist(OCG) of 202307 and 202310

All are crawled by python from the Konami database and website of Frontier-card-gaming, and then modified manually.

## **C. Target User:**

Yu-Gi-Oh players, especially newbies who want to get good grades in competitions, or know how top players choose their deck for the game.

In the system, we can :

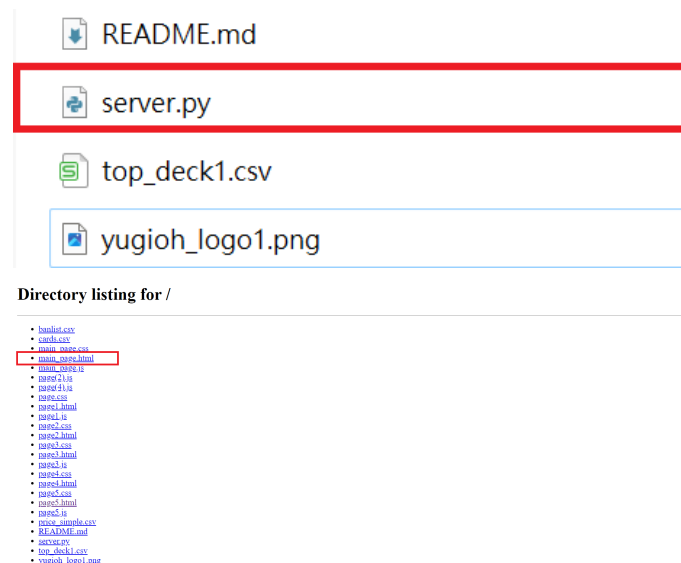
1. Check what decks are popular to competitive players these days, with their playing tactics, types, and the price.
2. Find decks that are both powerful and charming to us.

3. Check what cards we need for a certain deck, then unnecessary expenses can be reduced.
4. Check usage rate-change of competitive decks, then find out what decks are better choices for upcoming competitions. In addition, this helps us predict what decks might be influenced by future Banlists, then we can find ways to minimize loss.
5. Check the current Banlist, then we can adjust our composition of decks based on the list.

### D. System overview:

- **Process of Reproducing the Work**

1. Run "sever.py", and go to the address commented at the last line (just ctrl+click on the address).
2. At "Directory listing for /", click "main\_page.html" to go to our Home page.
3. The server might be unstable sometimes, you can change the PORT at line 5, then rerun the code to deal with this problem.
4. Functions :
  - "Meta Deck Distribution" for distribution of meta these days.
  - "Usage Rate of Decks" for usage rate of meta decks these days
  - "Deck Information" for all series of cards in the game so far
  - "Deck Price" for minimum expense of meta decks recently (Need to spend a little more for common cards)
  - "Banlist" for the official banlist , find out cards you can use only 2 or 1, even 0 in most contests



### Directory listing for /

- [bulletlist.css](#)
- [card.css](#)
- [main\\_page.css](#)
- [main\\_page.html](#)
- [main\\_page.js](#)
- [page2\\_1.js](#)
- [page2\\_1.js](#)
- [page.css](#)
- [page1.html](#)
- [page1.js](#)
- [page2.css](#)
- [page2.html](#)
- [page3.css](#)
- [page3.html](#)
- [page3.js](#)
- [page4.css](#)
- [page5.css](#)
- [page5.html](#)
- [page5.js](#)
- [price\\_simple.css](#)
- [README.md](#)
- [server.py](#)
- [top\\_deck1.css](#)
- [vishioh\\_login.py](#)

- [topdeck.csv](#)
- [yangioh\\_logol.png](#)

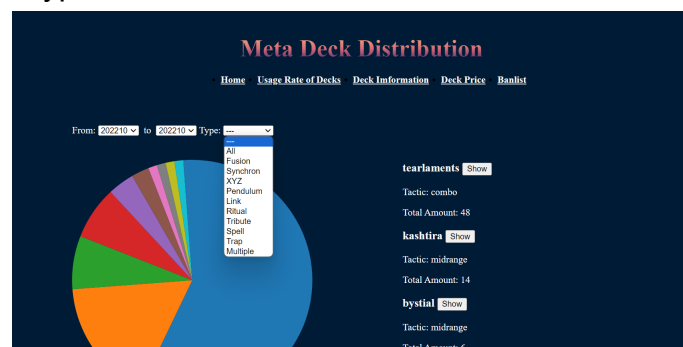


## ● Meta Deck Distribution:

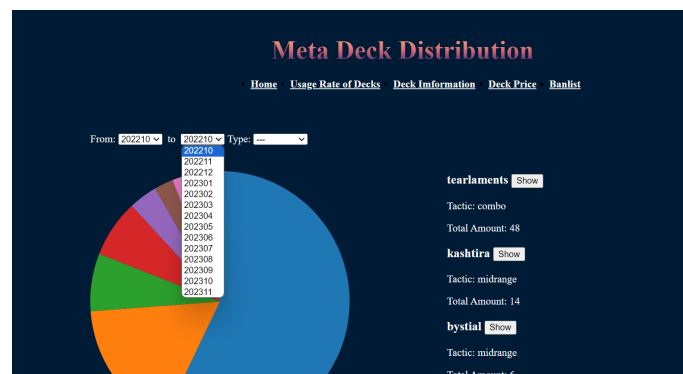
Our system aims to provide players with a comprehensive platform that delves into the trend of meta decks from the past year. It will enable users to observe the meta decks within the game over 202210~202311.

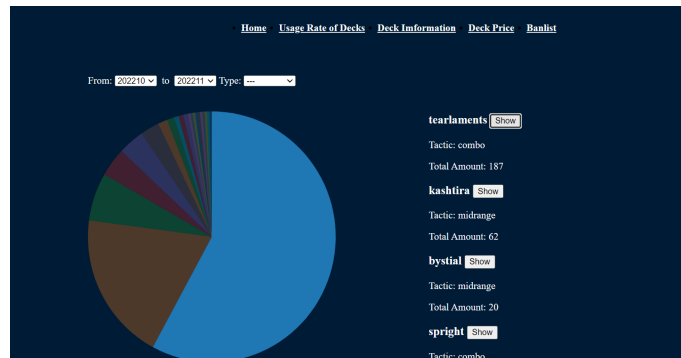
Besides deck names, users can focus on the information based on time frames (ex: months) and summoning methods (such as Fusion, XYZ, Synchron...).

In meta deck distribution. We use a pie chart to show the distribution of meta decks. Through the drop-down menu, we can choose certain deck types to show. For example, it will only show meta decks using link summon mainly if we choose type "link".



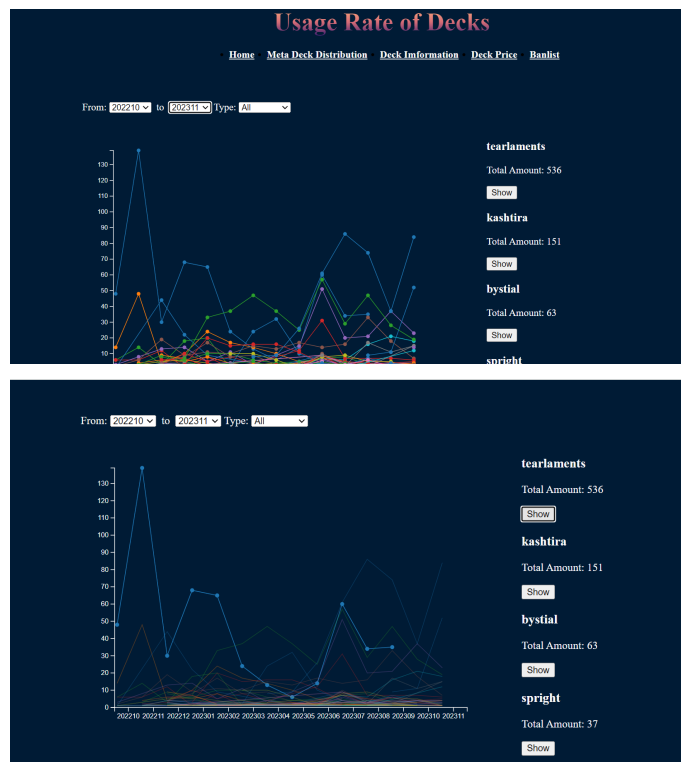
The right part shows top decks' information, we can highlight its corresponding part by pressing the "show" button... In this case, we know tearlaments is used the most in October of 2022, and its amount still exceeds others a lot in a later period. Through this part, we can identify the best deck in certain times .





## ● Usage Rate of Decks:

For "Usage Rate of Decks", we use a line graph to show the change of deck usage rate. With this part and the previous "Meta Deck Distribution", we can identify a good deck for competitions more accurately. For example, we first set time to the most recent one we give, then we can see usage rate of two decks rise sharply in the end. But after emphasizing the "most-used" Tearlaments known from the previous part, we know that it's not one of those two.

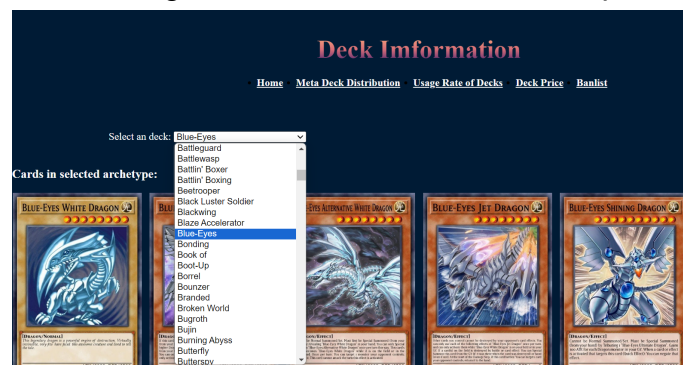


Then we set the timeline to begin when those two decks begin to rise. After that, set type as multiple and find out two growing lines are the same as the part without filtering, and they correspond to Rescue-ace and Fire king, which might be better choices for competitions recently.



## ● Deck information:

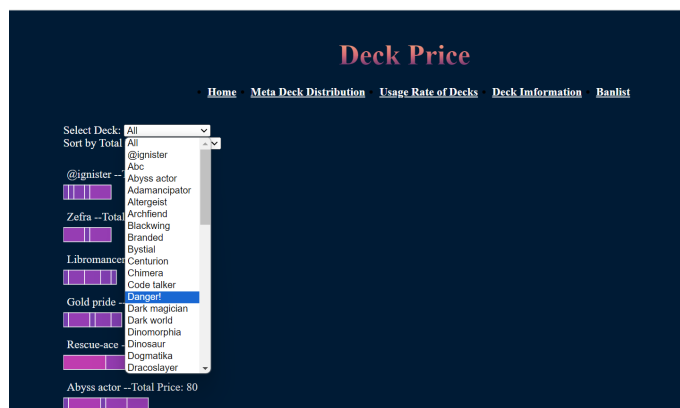
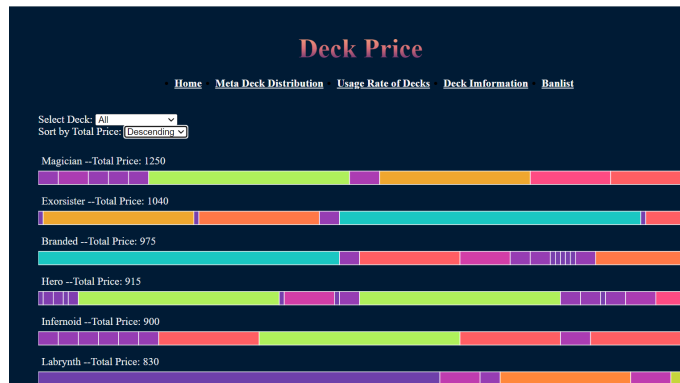
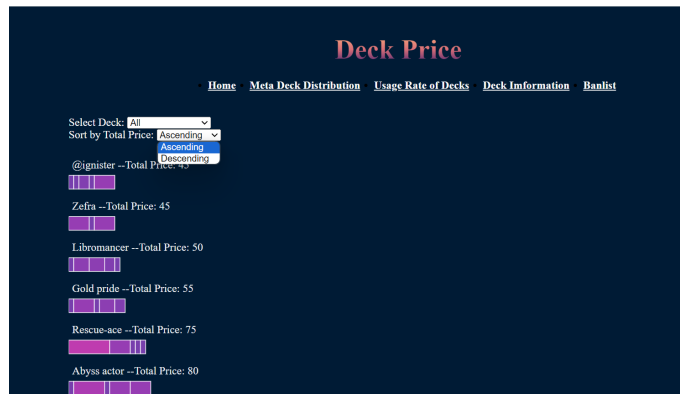
In this page, users can access all card series through the drop-down menu, then check cards contained in the chosen series. The cards' images will be shown, so we can know its complete detail. This feature aims to enhance understanding of certain card series and help build a satisfying deck.



## ● Deck price:

Price of cards is also a big concern for players, here we use stacked bar charts to represent the minimum expense for each deck that is qualified enough for entering a competition.

The system shows the data in ascending order initially, and can also be set to descending order. Besides, we can choose a certain deck by the drop-down menu and see its price .



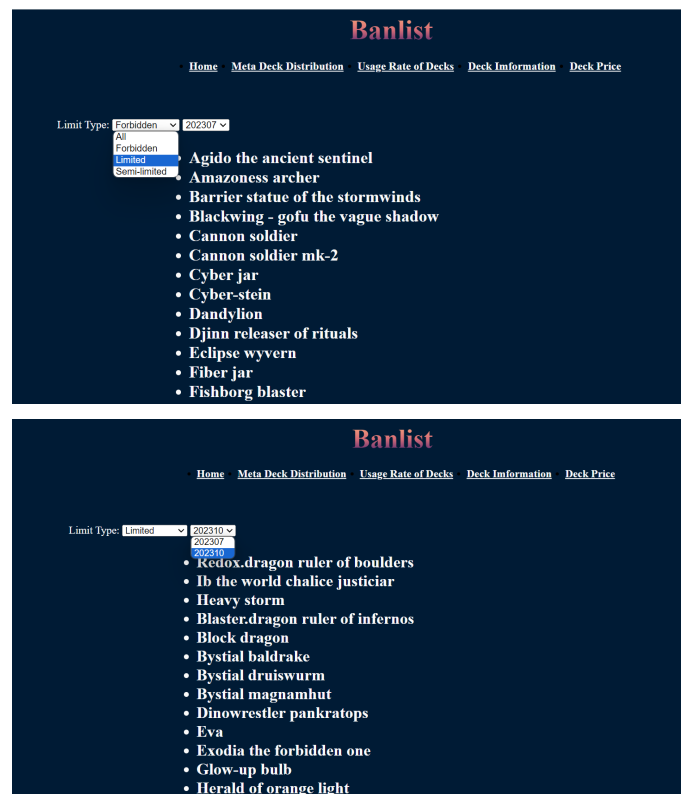
When we put the cursor on a color block in the stack, we can see its corresponding card name and price . Besides, the same color corresponds to the same price.



- **Banlist:**

There'll be a banlist every 3 months for the game, which limits the usable amount of certain powerful cards to balance the environment of competition. Knowing the latest Banlist is important for those attending competitions, since they will be disqualified once they are found using more cards than the banlist permits.

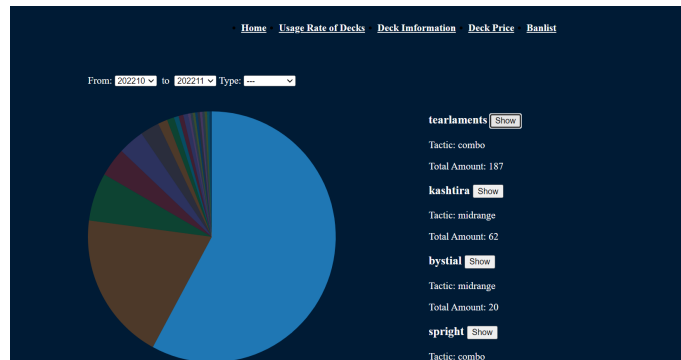
Here, we can check cards that are forbidden, limited and semi-limited by the drop-down menu respectively. In addition, we can choose Banlist at a different time for those interested in its history. This can be helpful to those looking forward to joining competitions.



## E. Insights we found:

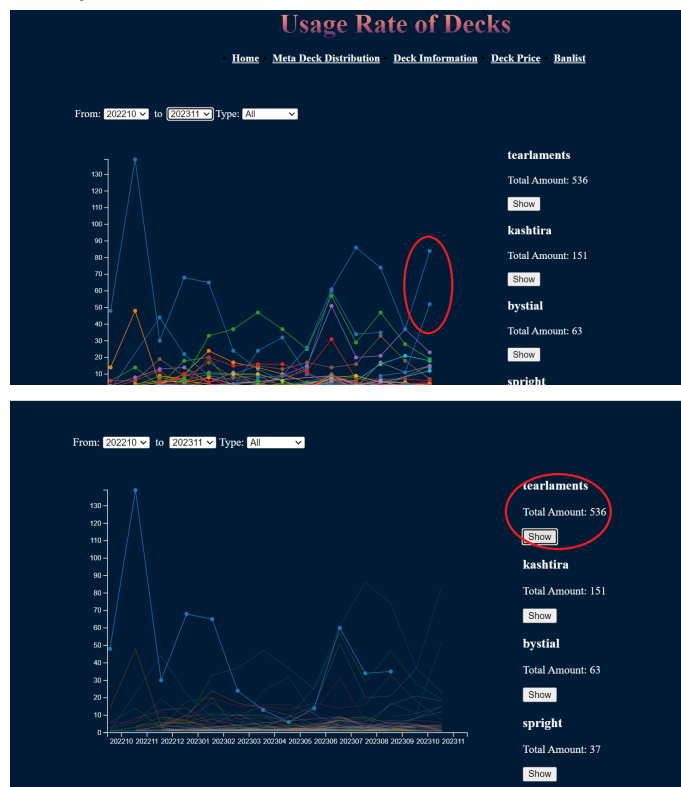
- **Most powerful deck in specific times :**

Through the "Meta Deck Distribution" section, we found that Tearlaments is the most popular one. In fact, Tearlaments is the accepted most powerful top deck throughout the history of Yu-Gi-Oh. After developing this system to become more dynamic, it definitely can show what's the latest deck trend to all players.

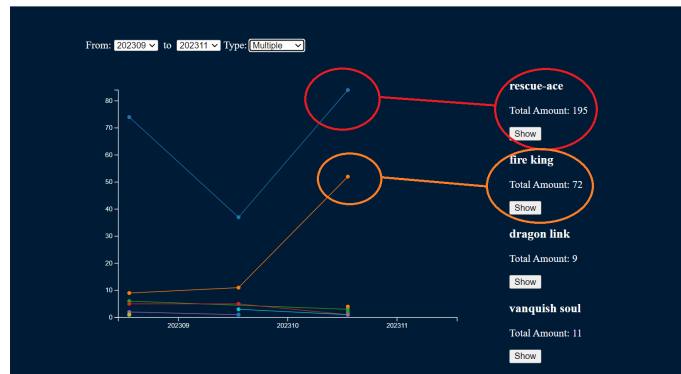


- **Better choices for decks recently :**

"Meta Deck Distribution" is not enough for choosing a good deck, we also need "Usage Rate of Decks". In our demo, despite the fact that Tearlaments is the best throughout the time, its usage rate dropped down to zero while Rescue-ace and Fire king rose sharply (caused by 202310 Banlist). So Rescue-ace and Fire king are actually the better choices recently. This tells us that we can't just choose a deck through the distribution of meta decks within a specific period.

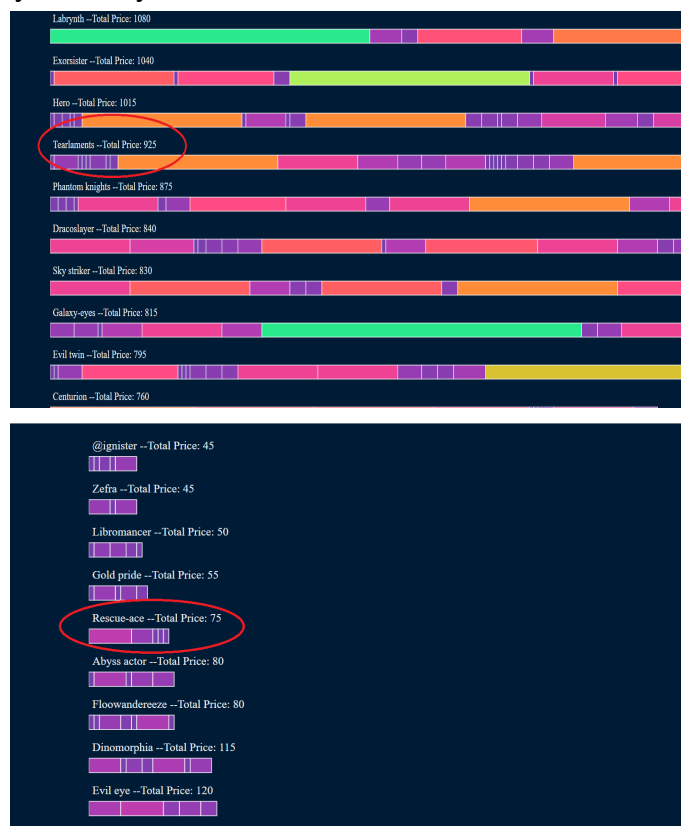






## ● Money that players need to spend :

Through previous results, we know that Tearlaments is the most powerful, but Rescue-ace and Fire king are better choices recently. However, those decks are actually not the most expensive ones and much cheaper than many other decks. This can somehow prove that we don't have to spend a lot of money for joining competitions and becoming top players, choosing the right deck is much more important, and Yu-Gi-Oh is not a pay-to-win game like some laymen say.



## F. Future work:

The "Yu-Gi-Oh Newbie No More" project has ventured into a comprehensive exploration of Yu-Gi-Oh decks, datasets, and meta-trends from 2022 to 2023, empowering both seasoned players and newcomers. We are sure that several

avenues can be explored to further enhance the system's utility and relevance in the evolving landscape of Yu-Gi-Oh gaming:

- **Expanding Meta Deck Analysis :**

While our system currently offers a comprehensive overview of meta decks, future work involves augmenting this analysis by incorporating predictive models. By integrating machine learning algorithms, we aim to forecast potential shifts in meta trends based on historical data patterns. This predictive capability will assist users in anticipating upcoming deck popularities, aiding strategic deck selection for competitive play.

- **Dynamic Usage Rate Analysis :**

Enhance the "Usage Rate of Decks" section with real-time or frequently updated usage rate graphs. By incorporating live data feeds or more frequent updates, users can access and join the latest trends within the game.

- **Personalized Deck Recommendations :**

Introducing a recommendation engine based on user preferences could benefit the system. By allowing users to input their play style, preferred summoning methods, or specific card series interest, the system can suggest tailored deck recommendations. This customization adds a personal touch to the system, assisting users in discovering decks that align with their preferences and gaming style.

- **Integration of Market Dynamics :**

For the "Deck Price" section, we plan to incorporate APIs or tools to retrieve current card prices from trading platforms or marketplaces, helping users make good decisions with the dynamic pricing of cards.

- **Interactive and User-Friendly Interface :**

Enhancing the system's user interface with interactive elements and user-friendly design principles will improve accessibility and engagement. Implementing features like tooltips for card details in the "Deck Information" section or refining visualization techniques for better comprehension of data can enhance the overall user experience.

Ultimately, by incorporating predictive analytics, personalization, real-time updates, market dynamics, interface improvements, and stability enhancements, the "Yu-Gi-Oh Newbie No More" system can evolve into an indispensable tool for Yu-Gi-Oh players seeking strategic insights and competitive advantage in the ever-evolving gaming landscape.