

You should update your **TeamInfo.md** with the teamName and project summary.

- Project Title: **Yu-Gi-Oh! Small World Bridge Evaluation**
  - **How the F\*\*\* do you use Small World!?**

- Project Summary: It should be a 1-2 paragraph description of what your project is.

Using the entire Yu-Gi-Oh! Card pool as one of our data sources, we want to evaluate the valid targets for the activation of “Small World”, given a specific card pool. Small World is a card that requires choosing a card from the deck that has exactly one of a set of identifiers and adding to your hand another card that has identifiers based on that card. “Small World” is a card that perplexes many players of Yu-Gi-Oh!, so some application that simplifies the process would be useful.

A simple application to give targets of “Small World” from a given hand or deck would give more simplicity. A connection to a database of card art could aid in the visual representation of cards.

- **Description** of an application of your choice. State as clearly as possible what you want to do. What problem do you want to solve, etc.?

The problem with the “Small World” card is that many players have difficulty understanding the way the card actually works. This is an issue for all forms of Yu-Gi-Oh! including digital and physical cards. “Small World” can potentially be a pivotal card in many strategies, so we want to help more players understand and utilize the effects of “Small World”. Currently, we want to create a MVP that, given a certain hand and deck of cards, evaluates legal targets for the “Small World” card. This would allow for players to check if “Small World” can activate and resolve in an expected fashion.

- What would be a good creative component (technically challenging function) that can improve the functionality of your application? (What is something cool that you want to include? How are you planning to achieve it?)

We thought that some data visualization elements would be cool and potentially useful for users if we had a graph where each card is a node and the connecting lines indicate that they can be used while activating “Small World.” There are also several other features we can implement into this visualization, such as using card art within the graph itself to aid in visual understanding. Another potential idea is displaying details such as card prices and usage rates in decks, which we believe could enhance a user’s decision-making process when deciding to incorporate a card into their deck.

A recommendation engine could also be constructed using card prices or win rates to recommend if a card should be banished with “Small World” which could aid in the decision process.

- **Usefulness.** Explain as clearly as possible why your chosen application is useful. What are the basic functions of your web application? (What can users of this website do? Which simple and complex features are there?). Make sure to answer the following questions: Are there any similar websites/applications out there? If so, what are they, and how is yours different?

“Small World” is a notoriously complicated card to resolve, so a web application that can simplify the process would be ideal. Ideally, users could upload or copy-paste a YDK (a standard format for Yu-Gi-Oh! decklists).

This, from our understanding, is a unique idea. Other card recommendation websites may exist, but an application focusing on the card “Small World” does not seem to exist.

- **Realness.** We want you to build a real application. So, make sure to locate real datasets. Describe your data sources (Where is the data from? In what format [csv, xls, txt,...], data size [cardinality and degree], what information does the data source capture?). It would be hard to satisfy stage 2 requirements with one dataset. Thus, **we strongly recommend identifying at least two different data sources for your project.**

The first source of data we thought we could utilize for this project was the entire existing TCG card pool for Yu-Gi-Oh!. This dataset includes all the card names, attributes, types, levels/ranks/link ratings, etc. which we deemed necessary for our purposes. We found several datasets of Yu-Gi-Oh! cards on the Kaggle platform in YDK format (YDK is a list of IDs).

A second potential source of data would be the card art associated with the same card names. This would allow us to pair the card characteristics with the appropriate art, enabling us to display cards on our application.

We also found a data source on Kaggle that contains several deck lists (in YDK format) which we can use to evaluate the effectiveness of “Small World” and its targets in specific decks.

There are other potential data sources that we want to explore further, such as tournament win rates, usage rates, card prices, etc. These additional data sources can help us develop a more in-depth analysis of how “Small World” interacts and what data it outputs against a specific card pool.

- A detailed description of the functionality that your website offers. This is where you talk about what the website delivers. Talk about how a user would interact with the application (i.e., things that one could create, delete, update, or search for). **Read the requirements for stage 4 to see what other functionalities you want to provide to the users.** You should include:
  - **A low-fidelity UI mockup:** What do you imagine your final application's interface might look like? A PowerPoint slide or a pencil sketch on a piece of paper works!



- **Project work distribution:** Who will be responsible for each of the tasks or subtasks? Explain how backend systems will be distributed across

members. Be as specific as possible as this could be part of the final peer evaluation metrics.

qizheng9: Project Manager/Back-End

tomasrs2: Database Architect/Back-End

nasht2: Database Architect/Back-End

schwenk4: Front-End/Back-End

For now, the work will be distributed evenly among the team members. qizheng9 will act as both Project Manager and Back-End developer, overseeing the project timeline and ensuring deadlines are met, while also contributing to backend development. tomasrs2, as the Database Architect, will design and manage the database schema and optimize its performance. nasht2 will focus on backend development tasks, working alongside qizheng9 to implement core functionalities. schwenk4 will handle the frontend development, ensuring a responsive and user-friendly interface.

As the project progresses, we may assign more specific roles and responsibilities based on the evolving needs of the project and the strengths of each team member.