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Data Science Programming

7 May 2024

Data Science Final Project - One Page Summary

In my final project, I analyzed the spells of Dungeons & Dragons, finding their main traits and trends. The purpose of this project is to determine the relevance of certain game mechanics for designers of RPGs, as well as more deeply explore the game design of D&D. I used a variety of tools to store, analyze, and graph my data. I used pandas to store the data from the original csv file, perform exploratory analysis, and clean the data. I used matplotlib and seaborn for graphing and visualization. Resources like w3 schools, ChatGPT, and seaborn documentation helped me throughout the process. Jupyter notebook and excel allowed me to view the data directly and test code snippets. Throughout the project, these were the main questions I was trying to answer:

* What is the average spell level?
* What types of components are required to cast spells? What types are most common?
* What percentage of spells are rituals?
* What is the average casting time for a spell?

I discovered that the average spell level was around 3.7, the most common spell component is verbal, and that the average casting time of a spell is almost 650 seconds. I also discovered that only 9.09% of spells can be casted as rituals. If I were presenting this information to a client, I would recommend that the level of spells should match the tone of the game they are making. A high fantasy world filled with magic should have a larger variety of spells and spell levels, while a more gritty game should have lower level spells that may also take longer to cast. If I were to continue analyzing this data in the future, I would look at other aspects of the game like equipment and classes.