WE C5 Module 3 Gen AI - Pokemon Database

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1 Introduction

I used ChatGPT to help me design this database in both SQL and NoSQL. Initially, I found that while ChatGPT was not the most accurate at forming tables and doing the logical part very well, it could explain the concepts beautifully. It would provide examples and give clear points of the why and why not, but again, this was surface level.

2 SQL

I used Oracle SQL for this project. ChatGPT had some basic confusions of the syntax and kept throwing errors with statement closures and writing in Postgresql. It did particularly well with creating tables and inserting values into them. It understood the many - to - many relationship and created 2 additional tables to accommodate this relationship. Very clear and straighforward solutions that worked on the first try were provided. My prior knowledge in working with SQL databases also helped because I could convey corrections in clear crisp sentences. For example questioning why it was persistent to use ids as primary keys instead of the unique names itself. Efficiency, flexibility and consistency were stated as reasons and they made sense. I still went ahead and asked it to alter its tables to have names as the primary key for readability purposes.

It did the database design job well but it is important to point out that these were still relatively simpler queries. I asked it to consider normal moves with power greater than those of grass moves as a powerful move and return them as well. It failed to do so multiple times - there were too many conditions for it to keep track of and check.

3 NoSQL

I used MongoDB as the NoSQL data base. ChatGPT had a hard time figuring this out and in fact confused me as well. It kept making 5 collections same as the 5 tables from SQL when it did not necessarily need to do that for a small simple database such as this one. Also I expected better guidance from ChatGPT as a novice in learning NoSQL but

it failed to do so.

I resorted to the MongoDB documentation and successfully created the database with 5 collections using MongoDB compass and Mongosh terminal. One thing I noticed was that ChatGPT helped me understand the documentation better by giving examples and simplifying the text wherever necessary. So again, its really good at explaining stuff given enough context or simply stating and reproducing texts but does terribly at logic building with loads of information. Also this exercise was fun and I will explore NoSQL databases this vacation!

4 Conclusion

ChatGPT is particularly good at straightforward tasks which may include logical tasks but it quickly fails when it has to encompass and remember more than 5 pieces of information (like joining tables based on multiple conditions). It is a very helpful tool when you do have at least rudimentary prior knowledge about the subject. This really helps in finding mistakes early on and tweaking the solutions to be perfect. This has been a common theme in all the other Gen AI experiments we have done as well. My major take away is that prompts need to be specific to the T or you are going to be back to square one in no time. Additionally, ChatGPT personally can never be a learning tool (as in I will never be able to fully learn something from it) but it will aid in learning (simplify, explain and help conceptualize concepts). This has been a take away from the ML bootcamp too and has really helped me get the most out of these gen AI interactions with university work as well be it expository essays or learning DBMS.