Granularity

This week, the topic was data granularity. After meeting with my team a couple of times this week as we went over our presentation. I have come to understand the importance of granularity when it comes to data and data warehouses. In this paper we discuss exactly what data granularity is, why is it important, and how can we use it in our data warehouses.

To understand data warehouses, we first need to understand data granularity. From the website C3.ai, they define it as, “Data granularity is a measure of the level of detail in a data structure. In time-series data, for example, the granularity of measurement might be based on intervals of years, months, weeks, days, or hours.”1 With this being said, data granularity can make a huge difference within a data structure. Depending on how detailed you need the data to be, can depend on the granularity level of that specific data.

Data granularity is very important to any companies’ systems. Whether you are a small company with one hundred employees or a big company with twenty thousand employees. The data that the company uses needs to be able to be transferred from point to point without interruption. But it also needs to be able to be analyzed as well. Depending on what you need analyzed depends on the granularity that the company will use to perform its duties. The more granular the information, the more one is able to analyze from the data. With this, if you don’t need a lot of data to be analyzed, then that will save you cost, memory, and computing resources. However, if you need data to be analyzed at a higher level, then those cost savings just went in the opposite direction and now you will need more of them.

The use of data granularity within a data warehouse is important. Depending on the data, depends on the level of granularity. Once data is being subdivided, then it becomes more granular. For instance. If we have a company where we must obtain our users information. Their information could consist of fields as first name, last name, house number, street name, city, state, zip code, male or female. If we don’t need a lot to analyze, then we might just stick with the name. But once we add all of their other information and divide it into section, then that data becomes more granular. This allows us to analyze the data to more precision which allows us to get more accurate information.2

Data granularity is the precision of the data and how precise we need the data we analyze. With this, we can make data that we can get to become really accurate. As we divide data, then more precise analyzation we can obtain. This is why granularity within data is really important is so we can get the data we need to be accurate to what we need it to be.

References

1. <https://c3.ai/glossary/features/data-granularity/#:~:text=What%20is%20Data%20Granularity%3F,weeks%2C%20days%2C%20or%20hours>.
2. <https://www.statisticshowto.com/data-granularity/>