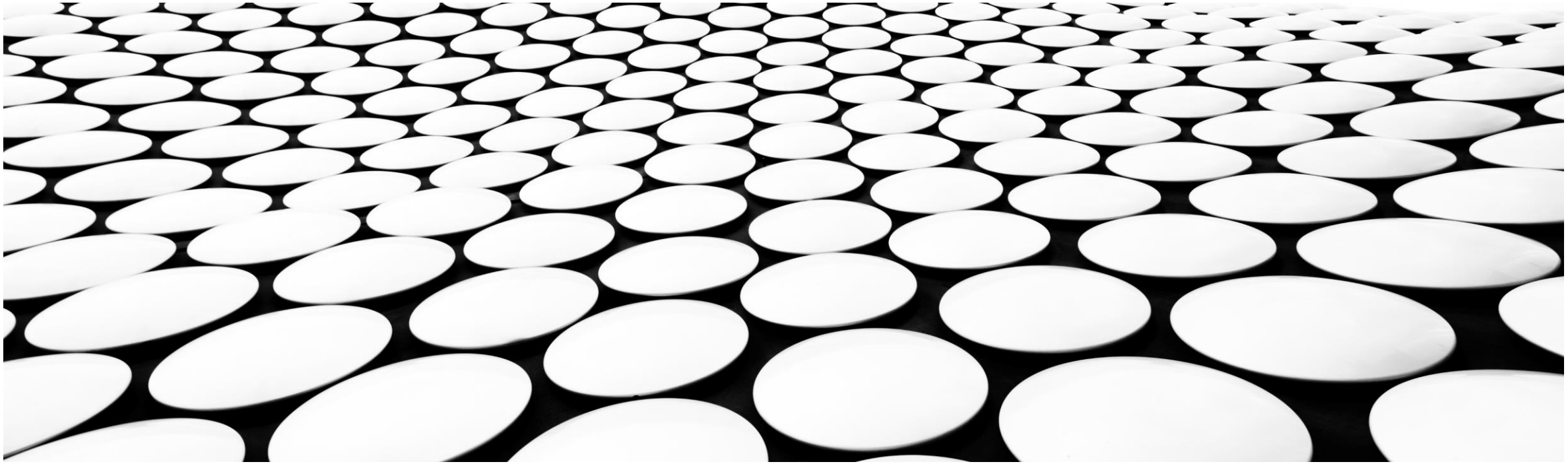
# ALTERNATIVES TO SQL

UNIT 8



# INITIAL POST

- With the dynamic technological environment, businesses are facing lots of challenges regarding data management. In fact, “high data velocity”, “data variety”, “data volume” and “data complexity” (Venkatramen et al, 2016) make it difficult to analyse data by using the tabular form of relational databases (SQL). NoSQL, which means "not only SQL" or “non-SQL”, is, therefore, considered as an alternative to relational databases, since it can store unstructured data. One example of NoSQL is when businesses perform big data analytics online, in order to analyse market trends, customer preferences and other information which can be beneficial for them (Venkatramen et al, 2016).
- My classmates, Grace, Michael and Wimal, have already clearly defined and explained NoSQL in their posts. I've just started reading on the topic today and I’ll try to add to this, by making references to the importance and usage of NoSQL in the field of digital humanities.
- According to researchers, it is quite difficult to illustrate “the figurative meaning of narratives through digital tools”, and since NoSQL is able to “group together multiple values” (Fan, 2018), it is becoming possible to associate, compare and juxtaposed data and to analyse literary content and figurative language. Furthermore, Franco Moretti, in his work *Graphs, Maps, Trees: Abstract Models for Literary History (2005),* illustrates the use of graphs and maps to visualise a large number of literary texts. This method is also known as “distant reading”. Indeed, graphs seem to model best how humanities researchers, especially those working with archival material, think about their data and its relationships (Blanke et al, 2013). Another term I’ve come across is culturomics, which “seeks to explore broad cultural trends through the computerized analysis of vast digital book archives, offering novel insights into the functioning of human society (Michel, *et al.*, 2011)” (cited in Leetaru, 2011). NoSQL is, therefore, a key element in analysing unstructured literary data.
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- Sources:
- Blanke, T. et al (2013). “Back to our data — Experiments with NoSQL technologies in the Humanities”. *IEEE International Conference on Big Data. Silicon Valley, USA (), 17–20.* Available from: doi:10.1109/BigData.2013.6691664 [Accessed 3 October 2021]
- Fan, L.T. (2018) “On the Value of Narratives in a Reflexive Digital Humanities.” Digital Studies/Le champ numérique 8(1): 5, 1–29. Available from: **https://doi.org/10.16995/dscn.285** [Accessed 3 October 2021]
- Venkatramen et al (2016) “SQL Versus NoSQL Movement with Big Data Analytics”. *I.J. Information Technology and Computer Science*. 12, 59-66. Available from: 10.5815/ijitcs.2016.12.07 [Accessed 3 October 2021]
- Leetaru, H. (2011) “Culturomics 2.0: Forecasting large–scale human behavior using global news media tone in time and space”. *First Monday*, Volume 16, Number 9 - 5 Available from: **https://firstmonday.org/ojs/index.php/fm/article/download/3663/3040** [Accessed 3 October 2021]
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# FEEDBACK AND SUMMARY

- Feedback from Dr Oliver: This is an interesting angle, some of the work you suggest that uses these technologies in different disciplines is a nice change! Do you think that these technologies are going to be better suited to capturing this data and why might that be?

- Extracts from:
- Wimal's post: 'a document-oriented database can store all of an object's data in a single document, and data is often stored as JSON, BSON, XML, or YAML document.'
- Grace's post: "NoSQL graph databases consist of a database which stores data as nodes and edges, in comparison relational databases store data in relational tables whereby the tables are defined by rows and columns with unique keys for each row which can link to rows in other tables. One of the benefits of using graph databases vs relational is that queries typically run faster in graph databases than relational, this is because relational databases require complex joins on data tables in order to perform complex queries, slowing the process down."