Week 3, Session 2

**Sharda: 7.5 - 7.8; Articles: 1) Data modeling in the age of big data, 2) Dipping a toe into data lakes, 3) How analytics is transforming agriculture, 4) Big data and the creative destruction of today's business models.**

1. Discuss one or more applications of stream analytics, perpetual analytics or critical event processing.
2. What is data in-motion? Discuss a use case that relies on data in-motion. Identify the sources of data, and the actionable intelligence that could be derived from an analysis of the data.
3. Is data modeling relevant or even feasible for NoSQL data storage technologies? Explain.
4. Compare and contrast any two file/data formats (e.g., CSV, JSON, AVRO, Parquet, ORC) for storing data in a data lake.
5. According to one of the experts, it is important to expose "relevant portion of the lake to business and data analysts..."  Discuss.
6. How can organizations "stop the progression from data lake to data swamp"?
7. Research and discuss a graph database.
8. Identify an industry (other than agriculture) and discuss how big data analytics is transforming it.
9. Discuss the role of big data analytics in Ag 3.0, the era of precision agriculture.
10. Identify and discuss a company that enjoys a "data strategist" position in an industry.
11. Research and discuss how a specific organization uses big data to improve its performance in one or more areas identified in Figure 4 (page 4 of Big Data and the creative...).
12. In your opinion, what would be the optimal model for locating analytical personnel/groups within an organization? Explain.