Think about data systems

What do we think of?

- Data-intensive v.s compute-intensive
  - Volume, Velocity, and Complexity
- Building blocks
  - databases, caches, search indexes, stream/batch processing
- Requirements (engineering-wise)
  - Functional - what to do, like allowing data to be stored, retrieved, searched, and processing in various ways
  - Non-Functional - general properties like security, reliability, compliance, scalability, compatibility, and maintainability

Three concerns focused

What do we want to talk about?

- Reliability
  - Making systems work correctly even when faults occur (hardware/software faults, human errors)
- Scalability
  - Having strategies for keeping performance good, even when load increase (data volume, traffic volume, or complexity)
- Maintainability
  - Making the system easier to maintain, and adapt for new use cases