Ronald Chen

Creating AI-Enabled Systems

1. Name two use cases for key-value databases.
   1. Session management on a large scale.
   2. Storing data for specific identifiable “keys”/users
2. Describe two reasons for choosing a key-value database for your application.
   1. Faster tracking of transient web attributes, i.e. shopping carts.
   2. Cached data from relational databases for improved performance.
3. Name two use cases for document databases.
   1. User Profiles
   2. Real-Time Data Management
4. Describe two reasons for choosing a document database for your application.
   1. Ease of access via RESTful API.
   2. No Schema/Distribution.
5. Name two use cases for column family databases.
   1. Large businesses needing large data collections.
   2. Applications with dynamic fields.
6. Describe two reasons for choosing a column family database for your application.
   1. Data requiring distribution over multiple data centers.
   2. Constant read/write access with tolerance to short-term inconsistencies.
7. Name two use cases for graph databases.
   1. Network and IT infrastructure management.
   2. Social Networking
8. Describe two reasons for choosing a graph database for your application.
   1. Large amounts of traffic that may have some relation to other entities.
   2. Instance-tracking between different entities.
9. Name two types of applications well suited for relational databases.
   1. Data Warehouses
   2. ACID transactional requirements.
10. Discuss the need for both NoSQL and relational databases in enterprise data management.
    1. With NoSQL, performance and efficiency/scalability is priority. Returns are much faster than relational databases, meaning there’s a lot of volume and/or variety. With Relational Databases, the complexity and storage are very organized. It’s easier to ensure ACID compliance and work with high transaction applications due to it’s nature.