

Lecture 05 - Future of Database

1. Distributed Data
2. Blockchain
3. NoSQL
 1. MongoDB
 2. Cassandra (Facebook / Microsoft)
 3. Redis
 4. CouchDB
 5. Hash Data Stores
4. Hardware Sort
5. More AI - GPT-3 as a front end
6. Performance, 50,000 TPS easy 1M TPS - about \$25,000 in hardware 10M TPS - \$200,000 in hardware 100M TPS - \$100k-\$500k (small) per month (leased)
7. Network Database
8. Time Series Database
9. Text Search (ElasticSearch)

Important things to remember.

1. Data is forever. The same database at a bank that is there now will need to be there 30 to 50 years from now.
2. Migration to new systems is rare to non-existent.
3. We are dealing with a very hard to test system.
4. Maintenance / long term is the key.

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