Algorithms You Should Know Before You Take System Design Interviews

These algorithms aren't just useful for acing system design interviews - they're also great tools for building real-world systems.

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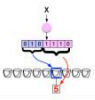
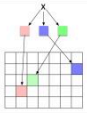
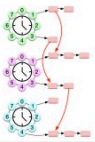
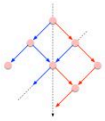
ByteByteGo.com

Algorithm	How it Works	Priority	Use Cases
Geohash		★★★★★	Location based service
Quadtree		★★★★★	Location based service
Consistent Hashing		★★★★★	Balance the load within a cluster of services
Leaky bucket		★★★★★	Rate limiter
Token bucket		★★★★★	Rate limiter
Trie		★★★★★	Search autocomplete
Rsync		★★★☆☆	File transfers
Raft/Paxos		★★★☆☆	Consensus algorithms
Bloomfilter		★★★☆☆	Eliminate costly lookups
Merkle tree		★★★☆☆	Identify inconsistencies between nodes
HyperLogLog		★☆☆☆☆	Count unique values fast
Count-min sketch		★☆☆☆☆	Estimate frequencies of items
Hierarchical timing wheels		★☆☆☆☆	Job scheduler
Operational transformation		★☆☆☆☆	Collaborative editing

We made a video on this topic. The video contains an updated list and provides real-world case studies.