How is Sketching Useful?

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- Compute a sketch of the data quickly

- Run time-intensive algorithms on much smaller sketch instead of on the full dataset

- **Distributed Setting**

- Compute a sketch of the local dataset and send it to the coordinator

- Smaller the sketch, lower the communication required

- **Streaming Setting**

- If the sketch construction is efficiently **updateable**, modify the sketch on each update to the underlying dataset

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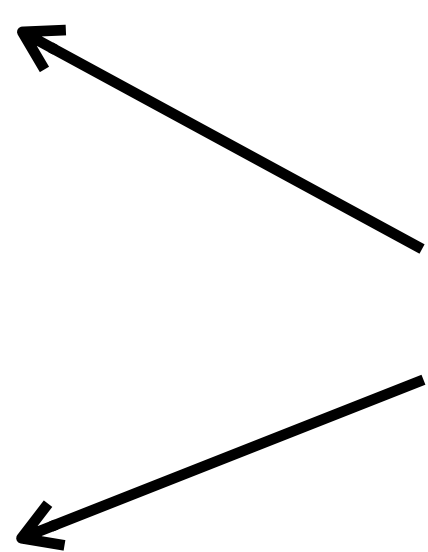

This Talk

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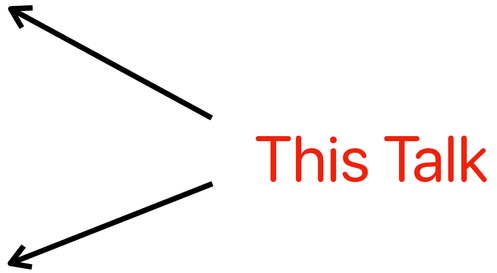
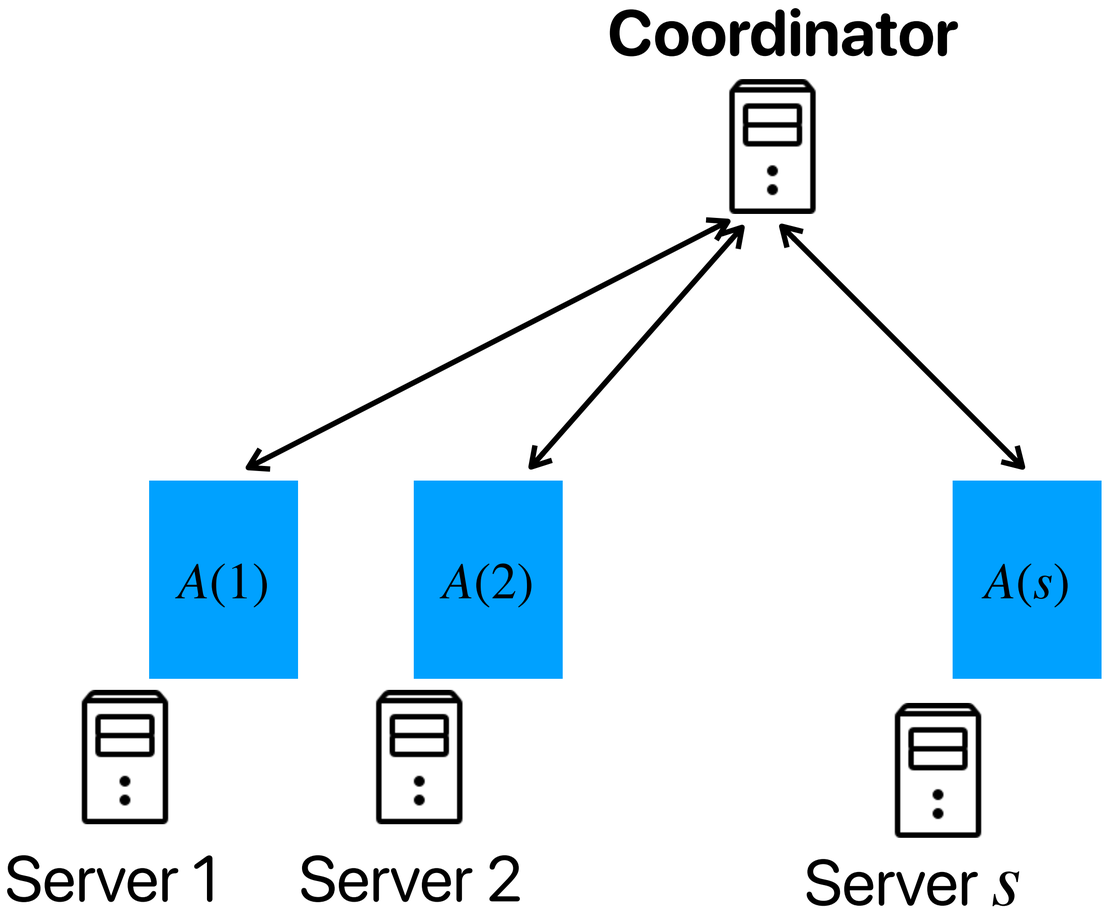
Distributed Setting