Streaming

- Approximate top singular vector in the row arrival model

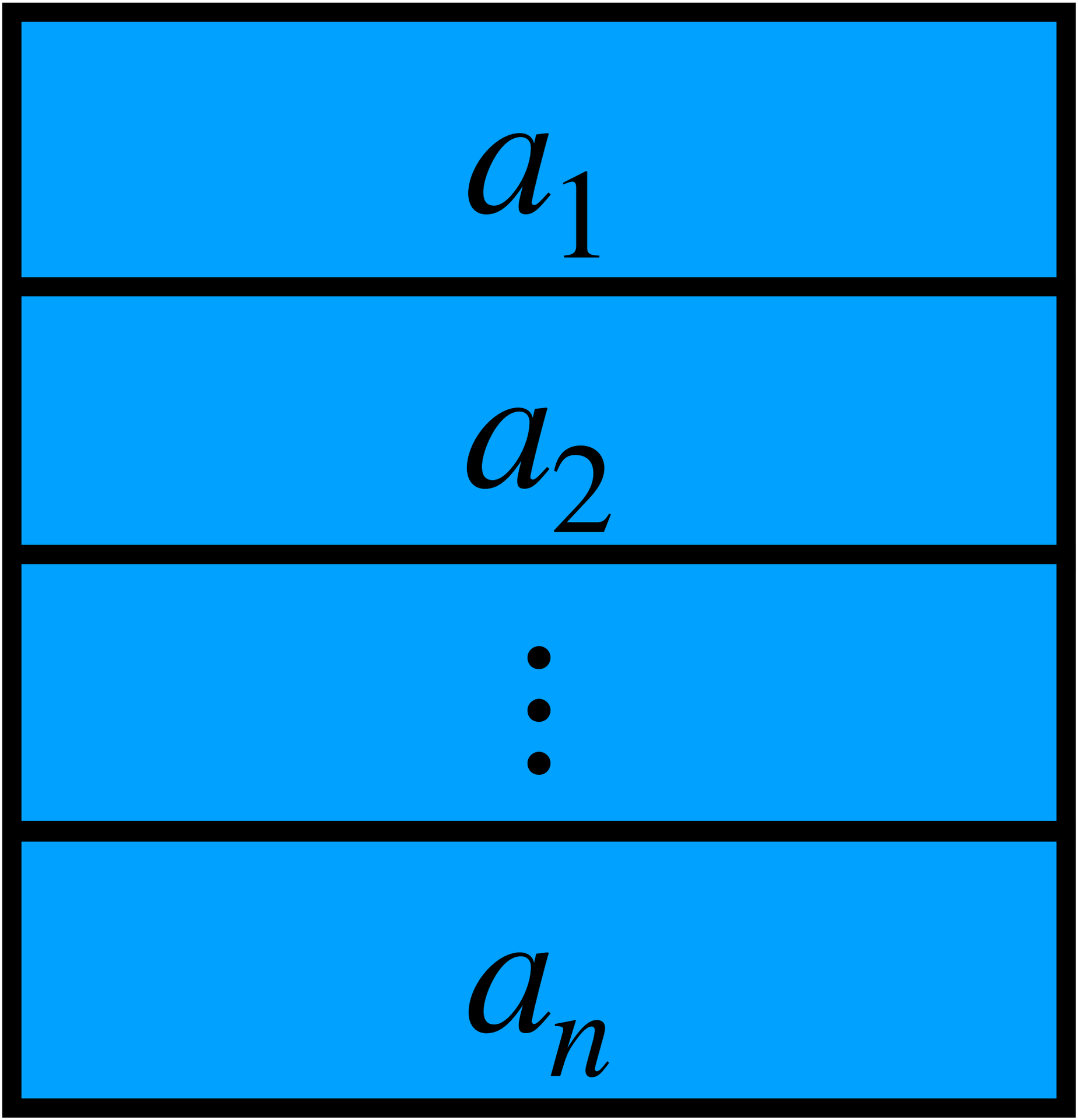
- Smaller space since a weaker model

- [Price '23] shows that if $\sigma_1(A)/\sigma_2(A) \leq O(1)$, then need $\Omega(d^2)$ space to approximate top singular vector

- Price also shows that if $\sigma_1(A)/\sigma_2(A) \geq C\sqrt{\log n \cdot \log d}$, then can approximate top singular vector in $\tilde{O}(d)$ space

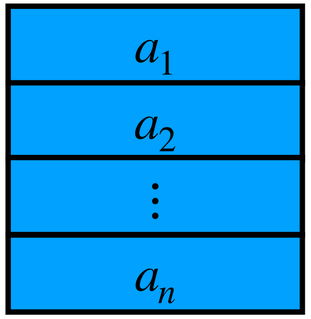
- Relax the gap assumption?

- Random order or some conditions on A to obtain better algorithms?


a_1
a_2
$\vdots$
a_n

42

Streaming



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Thank You!