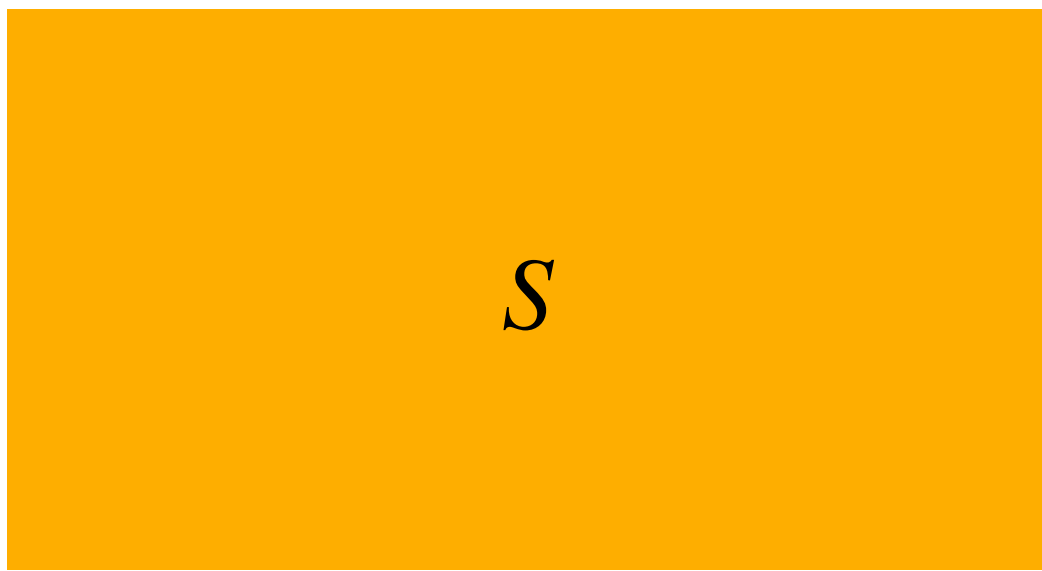


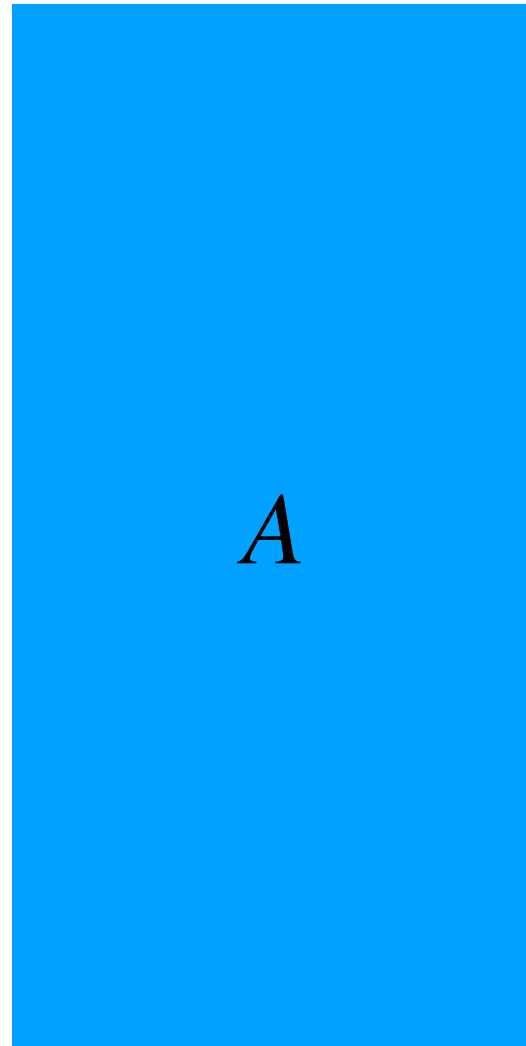
Linear Sketching

• Apply randomized linear transform

- CountSketch [Clarkson, Woodruff '13], OSNAP [Nelson, Nguyen '13], SRHT [Tropp '10], ...



\times



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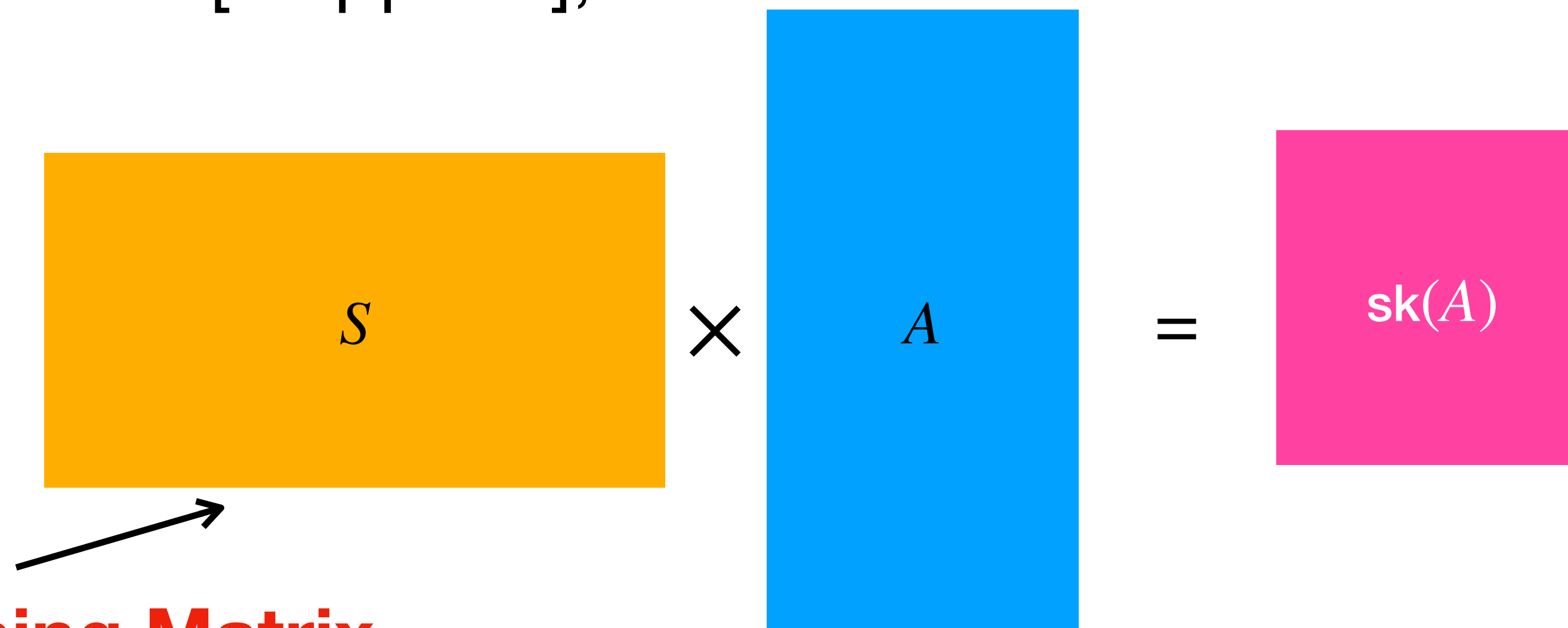


Sketching Matrix

- A good sketching matrix S consolidates information into the “sketch”

Linear Sketching

- Apply a randomized linear transform
 - CountSketch [Clarkson, Woodruff '13], OSNAP [Nelson, Nguyen '13], SRHT [Tropp '10], ...



Sketching Matrix

- A good sketching matrix S consolidates information into the “sketch”

How is Sketching Useful?

Classic Setting