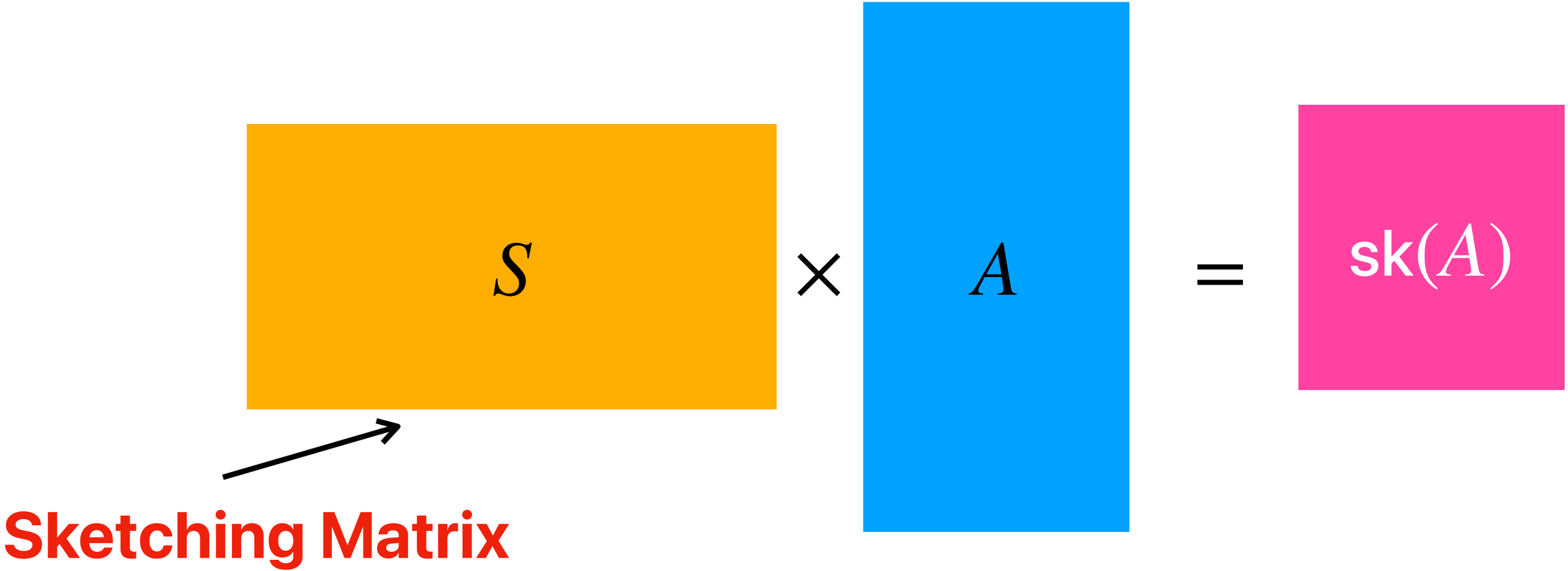
Linear Sketching

- Apply a randomized linear transform

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

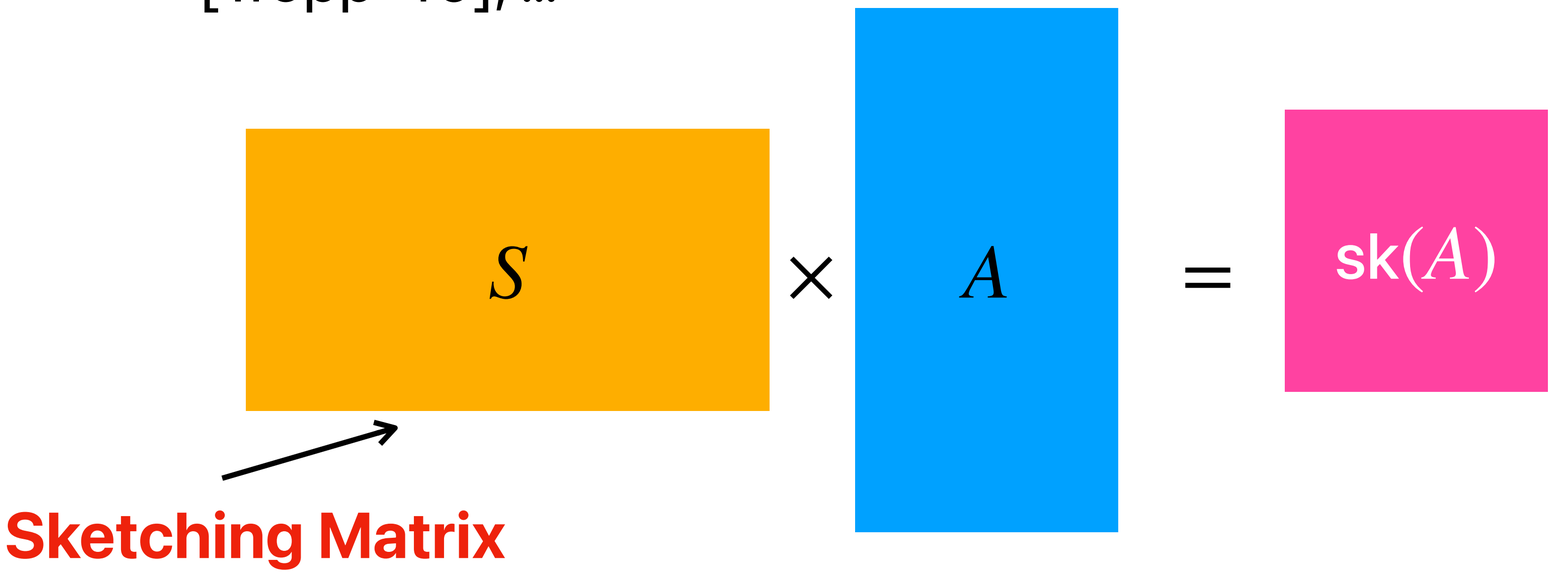

S
$\times$
A
$=$
$\mathrm{sk}(A)$
Sketching Matrix

- S consolidates information into the “sketch”

4

Linear Sketching

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



- S consolidates information into the “sketch”

An Example Problem

Principal Component Analysis