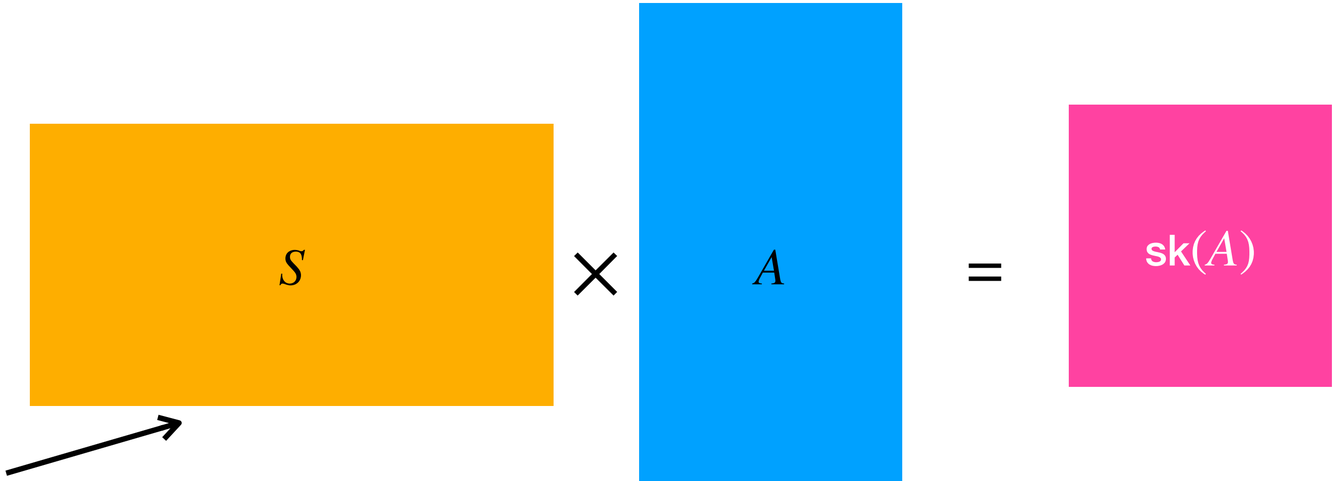
Linear Sketching

- 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”

Coresets

- A weighted subset of points
- A good solution for the subset ⇒ A good solution for the overall dataset
- Usually are randomized and constructed via importance sampling
    - Sensitivity Sampling [Feldman, Langberg '12]
    - Lewis Weight Sampling [Cohen, Peng '15]