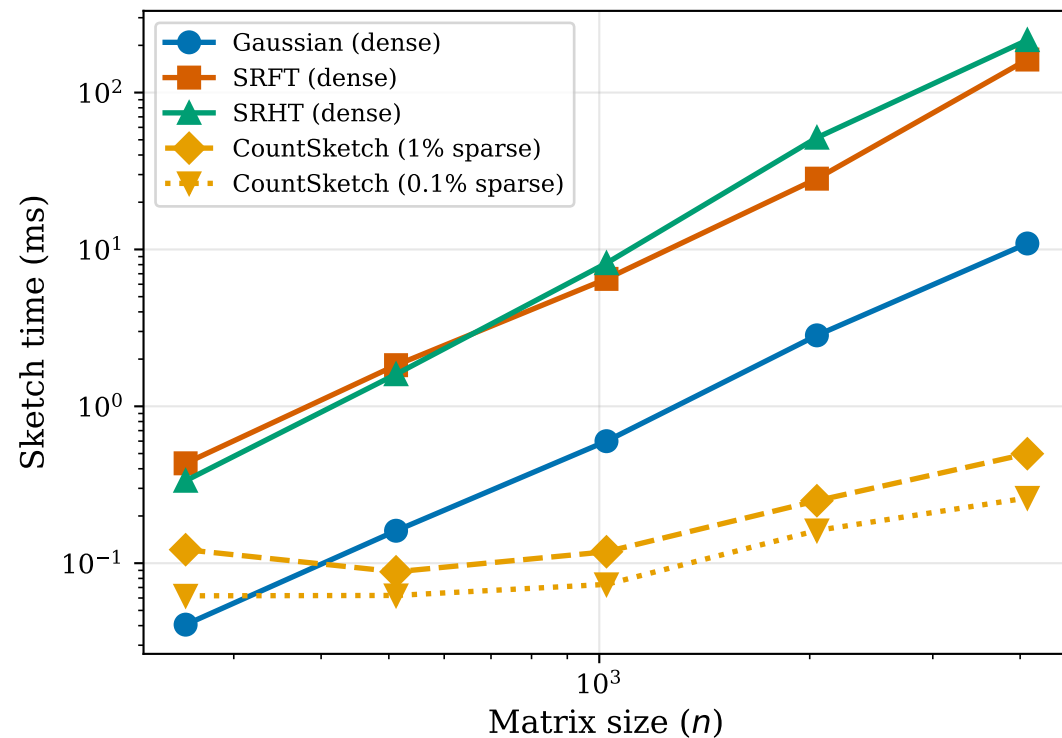


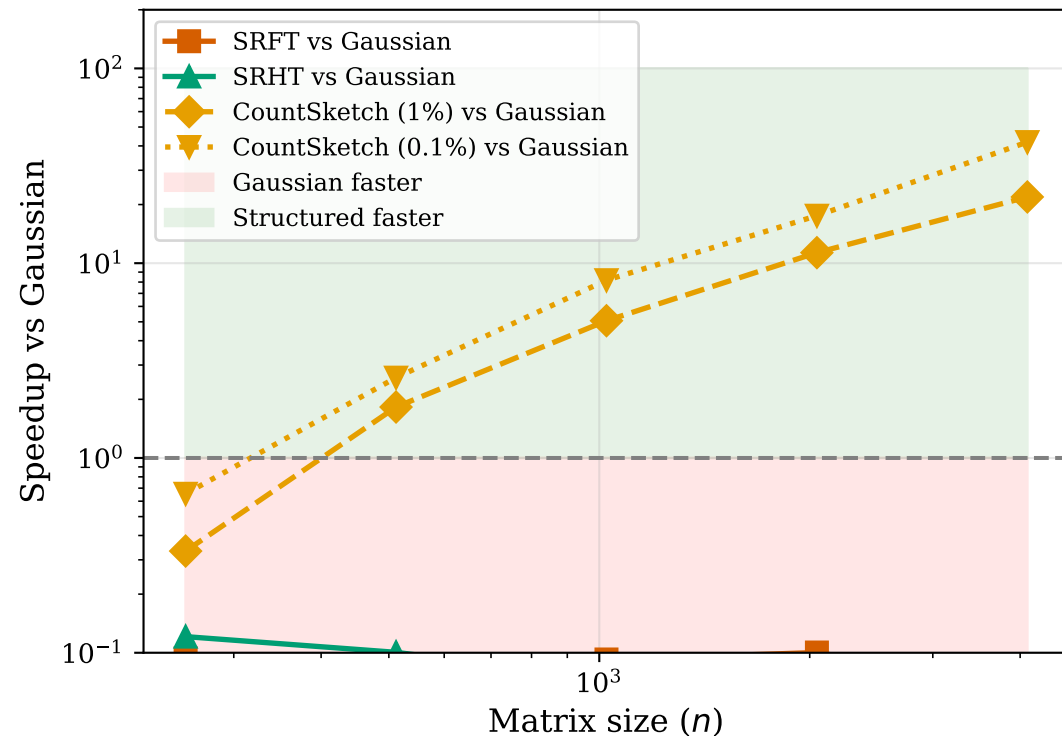
(a) Scaling with Matrix Size

$\ell = 100$



(c) Speedup Factors

$\ell = 100$



(b) Complexity Summary

Method	Complexity	Best For
Gaussian	$O(mn\ell)$	Small $\square$ , BLAS available
SRFT	$O(mn\log n)$	Large $\square$ , dense data
SRHT	$O(mn\log n)$	Large $\square$ , dense data
CountSketch	$O(\text{nnz}(A) \cdot \ell)$	Sparse data

(d) Method Selection Guide

