

December 12, 2011

Dear editors and reviewers,

I am submitting the attached manuscript, “The spectral norm error of a simple CUR decomposition for positive semidefinite matrices,” for your consideration for publication in SIAM J. Matrix Anal. Appl. An earlier version of this manuscript was submitted as SIMAX manuscript #085526.

In this manuscript, I analyze the spectral norm error of the simple Nystrom extension, a commonly used type of randomized CUR decomposition for low-rank approximation and approximation of the first dominant eigenvectors of large positive-semidefinite matrices. This analysis provides the first spectral norm relative-error bound available for this approximation scheme and illustrates the connection between Nystrom extension algorithms and the column subset selection problem.

Thank you,

Alex Gittens