

## Math 782 Hw3 (Computer)

Please do the following with the picture I provide or any figures you like

1. import the file into Matlab using *imread*, where it is stored as a uint8 (8-bit unsigned integer) array
2. convert this to the ordinary double array format using *double*
3. compute the SVD of this array
4. compute the low rank approximation matrix from the retained singular values and corresponding singular vectors
5. convert this back to the uint8 format using *uint8*
6. save the low rank image as a new JPEG file using *imwrite*

Check out how good your low rank approximation images by viewing them outside of Matlab and comment on how much storage space your approximation images needed.