

# Singular Value Decomposition (SVD)

Instructor: Kunpeng Zhang ([kzhang6@uic.edu](mailto:kzhang6@uic.edu))  
TA: Minghong Xu ([mxu29@uic.edu](mailto:mxu29@uic.edu))

The Deadline: 6:00PM, Apr. 6, 2015 (Monday)

Find the SVD of matrix  $A$ ,  $U\Sigma V^T$ , where  $A = \begin{bmatrix} 3 & 2 & 2 \\ 2 & 3 & -2 \\ 4 & -8 & 7 \end{bmatrix}$

## Requirements:

- Please show every step when you calculate  $U$ ,  $V$ , and  $\Sigma$ .
- When you submit your assignment, you need to upload a WORD or PDF file and name it as <YOUR UID>\_ASSIGN5. Assignments not following this rule will not be graded. In addition, no resubmission after TA grades it. Late submission rule: 10% deduction for one day late. Late submission over a week is NOT acceptable.

DO NOT copy any codes from others. Otherwise, both will be penalized.