

## **Week I - Math Assignment**

1) Obtain a Singular Value Decomposition For :

$$\mathbf{M} = \begin{pmatrix} 2 & 1 \\ 3 & 2 \\ 1 & 4 \end{pmatrix}$$

Verify your results using the relations between the right & left singular vectors of the matrix ***M***.

2) Obtain a Cholesky Decomposition For :

$$\mathbf{M} = \begin{pmatrix} 2 & -1 & 2 \\ -1 & 4 & -3 \\ 2 & -3 & 5 \end{pmatrix}$$