Task for lecture 4

Recall the least squares problems called Pontius and Fillip from lecture 2. Consider your solutions using SVD. Your task:

- Preform an error estimation of your solutions.
- For Pontius perform an error estimation of your solution where the LU decomposition has been used. For the normal equations $A^T \cdot A \cdot x = A^T b$ then for $C = A^T \cdot A$ it holds that $\sigma(a_j)^2 = (C^{-1})_{jj}$.
- Compare your error estimates for the two methods.