INDIAN INSTITUTE
OF TECHNOLOGY
PALAKKAD

COMPUTER SCIENCE AND ENGINEERING
Indian Institute of Technology Palakkad
CS5657: Geometric Computer Vision
Lab 3: Singular Value Decomposition

1. **Singular Value Decompositions**

   - Read the image1.jpg from the first assignment. Convert it to a grayscale image. Normalize it between (0,1).
   - Take a singular value decomposition of the image. $I = \left(\sum_{i=1}^{n} u_i \sigma_i v_i^T \right)$.
   - Reconstruct the image from with **the largest** singular value.
   - Reconstruct the image from with **the largest 10, 20, 50, 100** singular values.