# **CS385 Computer Vision**

# **Lab-12: Introduction to 3D reconstruction**

# **100 points**

**Task :**

1. Consider the given image sets, extract the SIFT Features of the both images and compare features with other two feature extraction techniques(eg SURF, ORB etc).
2. Demonstrate feature matching of both image sets and compare the results after removing outliers. Try using different threshold for outliers.
3. The essential matrix is a property that relates two camera views of the same 3D scene. Find the Essential, Rotation and Translation Matrix in this cases. Compare with ORB/SIFT features.
4. Calculate the projection matrix of both cameras and Show the 3D plot of the structure obtained. Compare the results without undistorting the points.

**Submission:**

Demonstrate your work . Also submit as a single file the code and results.

<https://u.pcloud.com/#page=puplink&code=HjikZ9LYShMT0eDX78HImDrJHnFbbOwN7>