**TCV 3151 – Computer Vision**

**Lab 10**

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**Section 1: Theory**

The following questions will serve as a guide in confirming your understanding in the computer vision field. Answer all of the questions below.

1. What are the challenges in object recognition?

**Answer:**

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| 1. Viewpoint variation 2. Illumination 3. Occlusion 4. Scale 5. Deformation 6. Intra-class variation 7. Background clutter |

1. Locating good features from images is an important step in object recognition. Describe the characteristics of good features.

**Answer:**

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| 1. Invariant to illumination changes, scaling changes, rotation, viewing angle 2. Corner point is selected as the feature 3. Select the feature to be highly textured |

1. What are the advantages of Scale Invariant Feature Transform (SIFT)?

**Answer:**

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| Invariant to:   1. Changes in illumination 2. Uniform scaling 3. Rotation changes 4. Minor changes in viewing direction |