Gebze Technical University
Department of Computer Engineering
BIL 565 / BIL 463
(Introduction to) Computer Vision
Spring 2024
HW2
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In this homework, you will implement a simple object recognition algorithm based on feature detector and descriptors. First download the turntable dataset at https://rgbd-dataset.cs.washington.edu/dataset/rgbd-dataset/
We will use only the RGB parts of this database.

Here are the steps of your simple object recognition algorithm

- Pick only 10 objects available from the data set, there are around 300 objects available.
- Use at least 3 different feature detector and descriptor from OpenCV library to learn your objects. You may use the results of these library functions directly or modify them to make them better for your task.
- Use random 90% of the images (90% of the views) of each object for learning your objects.
- Use the rest 10% of the views to recognize your objects.

Write your report about your findings as below

- The list of your object selected
- Your features detected on the objects
- The details of your object recognition algorithm for each of the 3 feature detectors
- The final confusion matrix for the 10 object recognition experiments for 3 different algorithms.
- Your report gives step by step detailed algorithm for your system and show your intermediate results. You should also discuss the results in terms of their performance and the reasons for failures.