I07

**Group Id**

**Project Title:** Semantic Indoor Object Identification and Labeling Using RGB-D Camera

**Domain (Area of Project):** Image Processing

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| --- | --- | --- | --- |
|  | **C:\Users\MOHIT\Desktop\mohit-kaduskar.jpg** | C:\Users\TEMP.WDC.000\Downloads\3c02a84.jpg | C:\Users\TEMP.WDC.000\Downloads\2.jpg |
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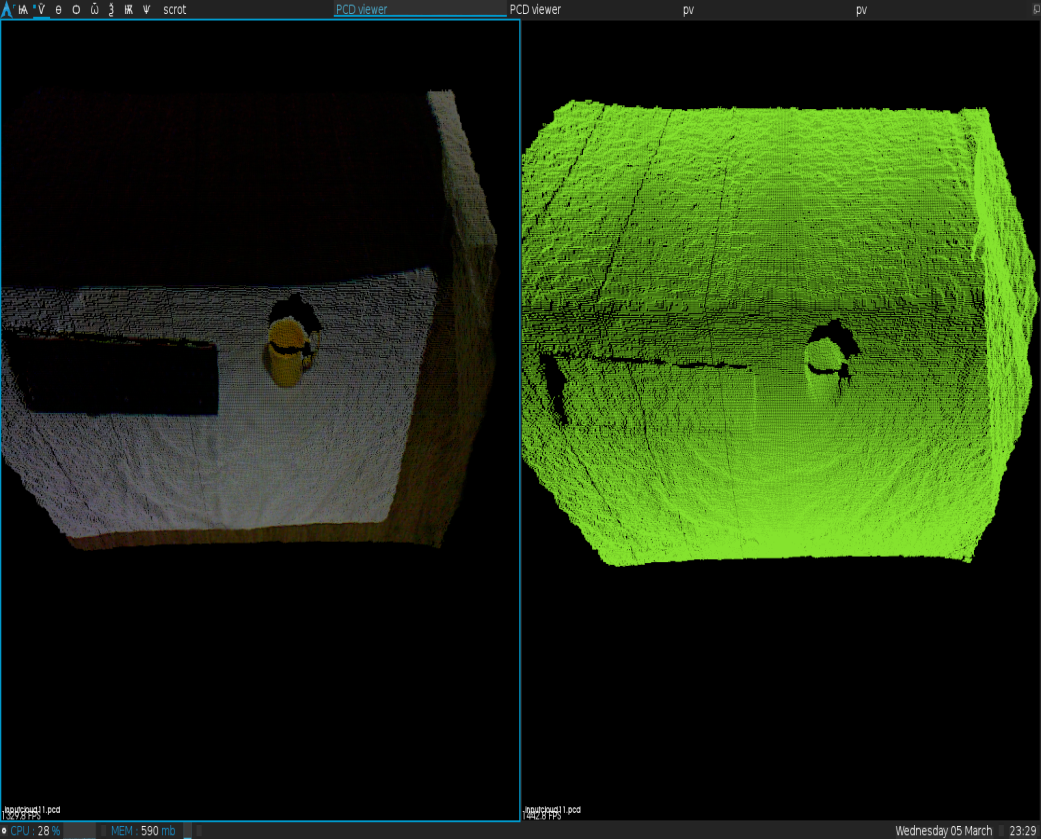
**Brief Idea of the Project:**

We consider the problem of high level scene understanding for personal robots. One of the original goals of computer vision was to fully understand a natural scene. This requires solving several sub-tasks simultaneously, including object detection, labeling of meaningful regions, and 3D reconstruction.

**Screenshots of the Project /Photos of Working Model:**

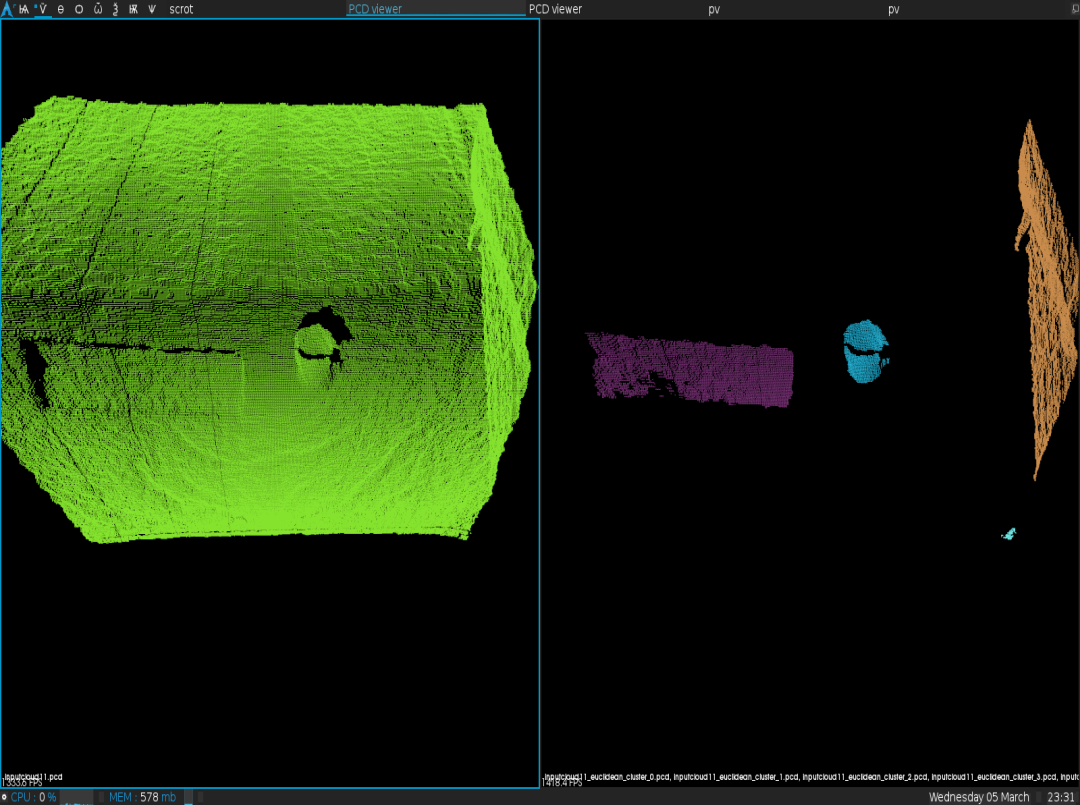
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Kinect capturing the objects in order to identify and label them (Setup)

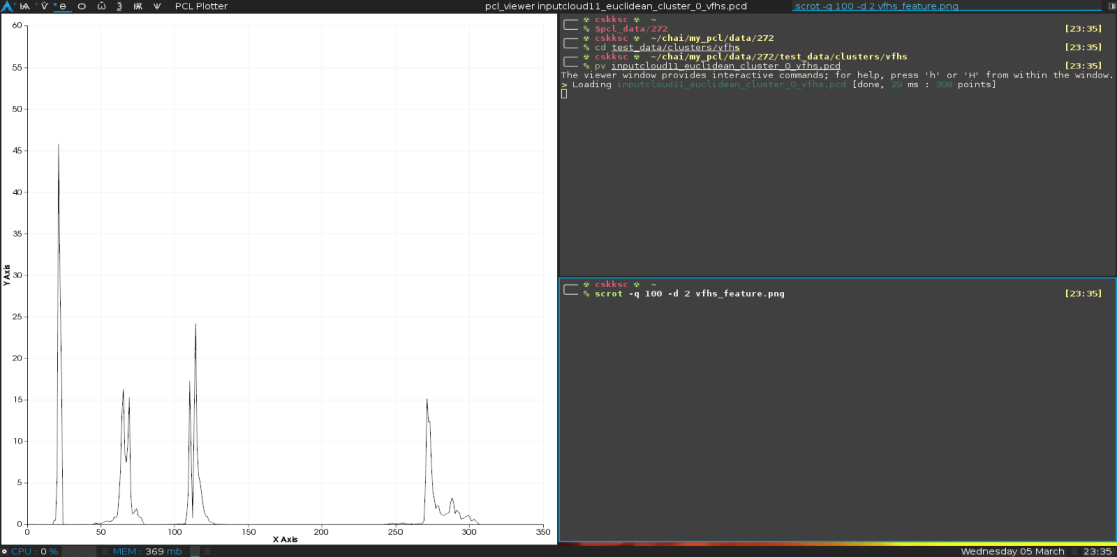
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Left: Color Information captured by Kinect

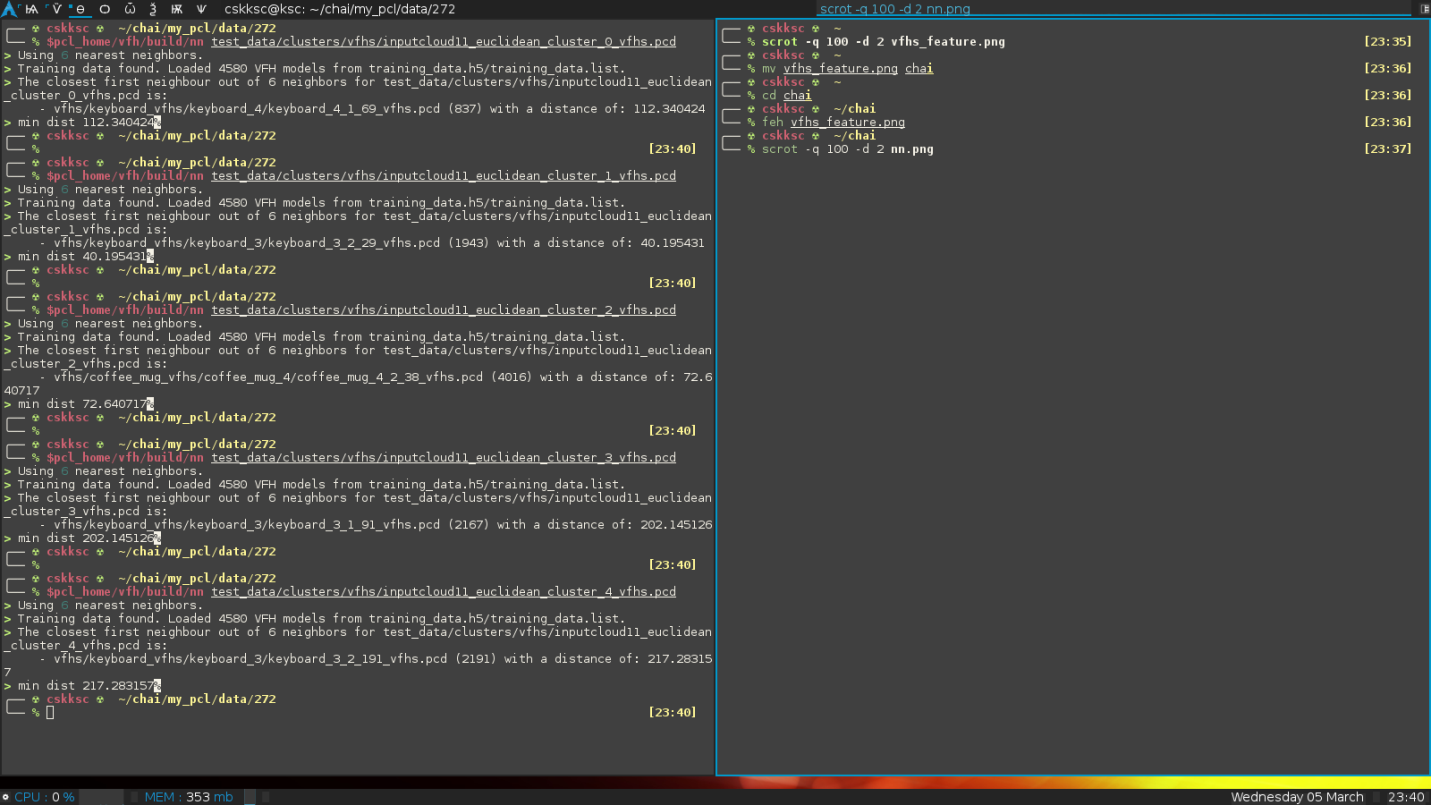
Right: Depth Information captured by Kinect

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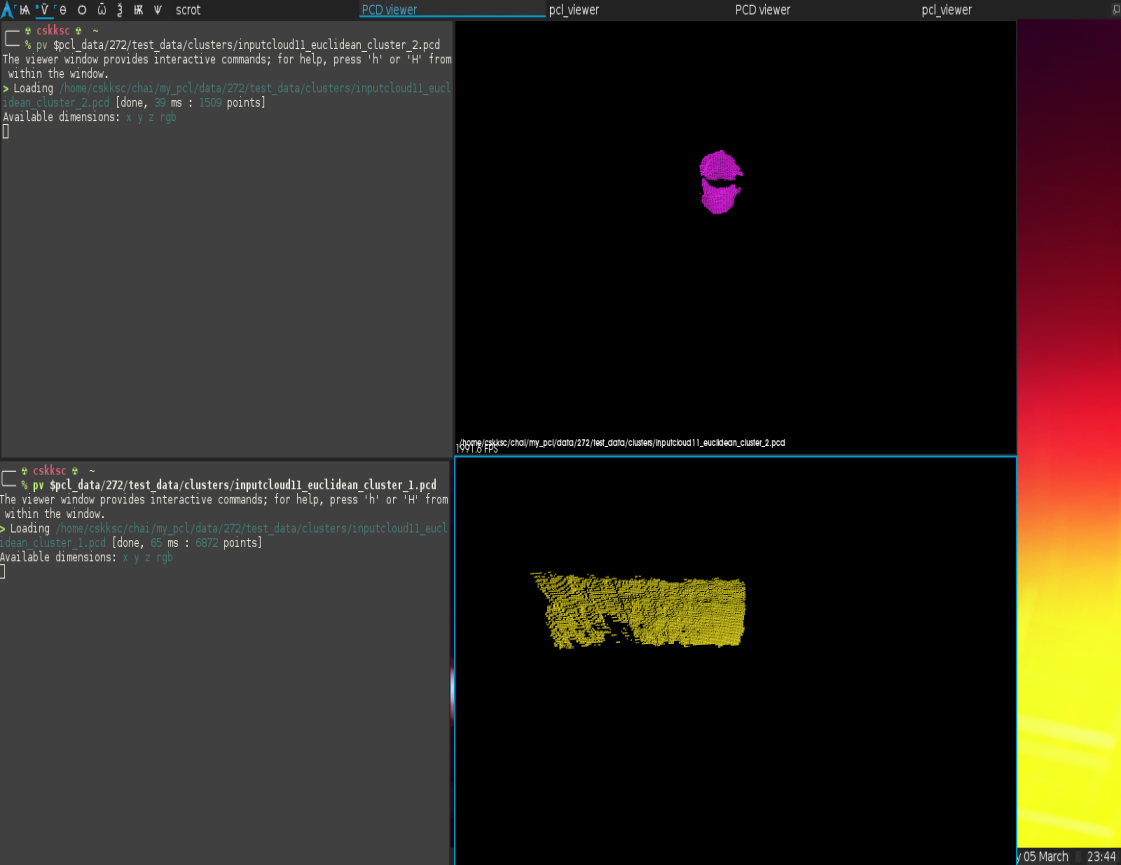
Right: Objects segmented from the input

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Feature of each individual cluster extracted and represented on left

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Feature comparison of individual segments with training set and segment with minimum distance determined

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Verification: Minimum distance is of clusters representing clusters

**Applications:**

1. Personal Robotics
2. Content Based Image Retrieval

**Awards if Any for TPP/Competitions/Paper Publication/ Any Other Pls. Specify:**

N/A