UDACITY

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# 3D Perception

审阅

代码审阅

HISTORY

## Meets Specifications

You have done great work here, and have understood the concepts well.
With all the work you have done here, you have qualified for all rubric requirements, and hence pass the project.
Congrats on that!!

Keep up this spirit, and all the best!! :)

### Writeup

**The writeup / README should include a statement and supporting figures / images that explain how each rubric item was addressed, and specifically where in the code each step was handled. The writeup should include a discussion of what worked, what didn't and how the project implementation could be improved going forward.**

The writeup is neat and contains all the sections to explicitly handle all the rubric points.

### Exercise 1, 2 and 3 Pipeline Implemented

**The `pcl_callback()` function within the template Python script has been filled out to include filtering and RANSAC plane fitting. Not required, but to help your reviewer consider adding screenshots of output at different steps in your writeup with brief explanations.**

Steps for cluster segmentation have been added to the `pcl_callback()` function in the template Python script. Not required, but to help your reviewer consider adding screenshots of output at different steps in your writeup with brief explanations.

Both `compute_color_histograms()` and `compute_normal_histograms()` functions have been filled out and SVM has been trained using `train_svm.py`. Please provide a snapshot of your normalized confusion matrix (output from `train_svm.py` in your writeup / README. Object recognition steps have been implemented in the `pcl_callback()` function within template Python script. Not required, but to help your reviewer consider adding screenshots of output at different steps in your writeup with brief explanations.

## Pick and Place Setup

You can add this functionality to your already existing ros node or create a new node that communicates with your perception pipeline to perform sequential object recognition. Save your PickPlace requests into `output_1.yaml`, `output_2.yaml`, and `output_3.yaml` for each scene respectively. Add screenshots in your writeup of output showing label markers in RViz to demonstrate your object recognition success rate in each of the three scenarios. Note: for a passing submission, your pipeline must correctly identify 100% of objects in `test1.world`, 80% (4/5) in `test2.world` and 75% (6/8) in `test3.world`.

The results you have achieved are awesome. The step by step run approach you have chosen is also really good, as it makes one realise the importance of each filter and parameter more appropriately.

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