

Weekly Meeting

Week 7

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Steps for Kernel Point Classification

Steps

1. Object Classification
 - **Training a Model**
 - Plot a logged training
 - Test the trained model
 2. Pretrained Model
 3. Scene Segmentation
 4. Slam Segmentation
 5. Visualisation.
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Learning Process from KPConv

<https://github.com/HuguesTHOMAS/KPConv>
Issues

- Deprecated
- Not Updated
- Some tools do not work

Installation instructions for Ubuntu 16.04

- Make sure [CUDA](#) and [cuDNN](#) are installed. Three configurations have been tested:
 - TensorFlow 1.4.1, CUDA 8.0 and cuDNN 6.0
 - TensorFlow 1.12.0, CUDA 9.0 and cuDNN 7.4
 - TensorFlow 1.13.0, CUDA 10.0 and cuDNN 7.5 (bug found only with this version).

Figure 1: Required Version

```
import tensorflow  
tensorflow.__version__
```

```
'2.15.0'
```

Figure 2: New Version

Learning Process from KPConv PyTorch

<https://github.com/HuguesTHOMAS/KPConv-PyTorch>

Object Classification: Training Model.

Result: It is not done yet.

Reference

- [1] Hugues Thomas et al. “Kpconv: Flexible and deformable convolution for point clouds”. In: *Proceedings of the IEEE/CVF international conference on computer vision*. 2019, pp. 6411–6420.

[1]