

# Weekly Meeting

## Week 8

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## Previous Work: Steps for Kernel Point Classification

### Steps

- 1. Object Classification
- 2. Pretrained Model
- 3. **Scene Segmentation**
- 4. Slam Segmentation
- 5. Visualisation.

## Previous Work: Learning Process from KPConv PyTorch

- <https://github.com/HuguesTHOMAS/KPConv-PyTorch>
- Object Classification: Training Model.
- Result: Almost Done (still any errors in the last steps when testing the model)
- Next Work : Input my data to the codes.

# What I Have learned for Focused Research

## Why Semantic Segmentation?

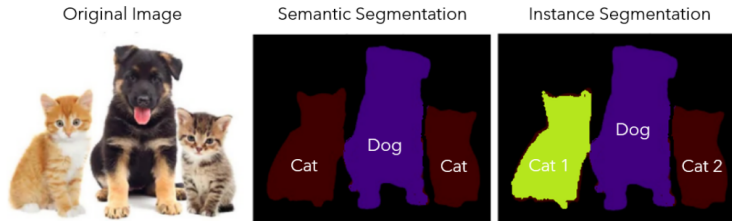


Figure 1: types of segmentation

# What I Have learned for Focused Research

## Why Kernel Point Cloud Convolutional?

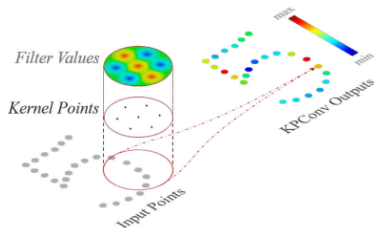


Figure 2: types of segmentation

# What Should I Learn for Focused Research

## Next Steps: Learning Objectives

### Architectural Framework : Semantic Segmentation

- Math Modelling, including deformable and convolution
- Deep Learning (Unet : Encoder and Decoder)
- Masking\*
- Quality Control\*

## Reference

- [1] Martin Kada and Dmitry Kuramin. “ALS point cloud classification using Pointnet++ and KPConv with prior knowledge”. In: *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences* 46 (2021), pp. 91–96.
- [2] 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] [2]