

3D All The Way:

Semantic Segmentation of Urban Scenes From Start to End in 3D

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- ▶ Semantic segmentation of 3D city models
- ▶ Starting from an SfM reconstruction, classification and facade modelling purely in 3D
- ▶ No need for slow image-based semantic segmentation methods
- ▶ High quality labellings, with significant speed benefits (20× faster, entire streets in a matter of minutes)
- ▶ Combining a state-of-the-art 2D classifier: further boosting the performance (slower)
- ▶ A novel facade separation based on the results of semantic facade analysis
- ▶ 3D-specific principles like alignment, symmetry in a framework optimized using integer quadratic programming formulation
- ▶ Evaluated on Rue-Monge2014