

LabPics Python Evaluation Scripts

These scripts are used to evaluate the quality of the predicted segmentation maps. Semantic map evaluation.

Semantic map evaluation:

Evaluate semantic segmentation quality.

In ***EvaluateSemantic_Segmentation.py*** file Set parameters ***GTSemanticDir*** and ***PredSemanticDir*** to the Ground truth and predicted segmentation folders paths. The folder structures and file format should be in the Simple format described in the Simple folder readme file. The prediction maps should only contain non-occluded regions. Values other than 1 in the prediction maps will be considered as 0. The occluded region in the ground truth will be ignored. Semantic evaluation is done based on the intersection over union IOU measurement.

Instance map all materials as single class

Evaluate instance segmentation quality but without classification accuracy.

In ***EvaluatePQ_SINGLE_CLASS.py*** Set parameters ***GTDDir*** and ***PredDir*** to the Ground truth and predicted instance map folders paths. The folder structures and file format should be in the Simple format described in the Simple folder readme file. Since this evaluation class agnostic there no need to supply the data .json file with category per instance. An instance evaluation is done based on the panoptic quality (PQ) see <https://arxiv.org/pdf/1801.00868.pdf> for more details.

Instance map multi-class no classification

Evaluate instance per class but ignore classification accuracy (predicted match between predicted and GT segments are ignored).

In ***EvaluatePQ_Multi_CLASS_Agnostic.py*** Set parameters ***GTDDir*** and ***PredDir*** to the Ground truth and predicted instance map folder paths. In addition set parameters ***GTDataFile*** to the paths of the ground truth instance category .json files. The folder

structures and file format should be in the Simple format described in the Simple folder readme file.

Instance map multi-class with a class (standard PQ)

Evaluate instance per class with classification (standard PQ metrics).

In ***EvaluatePQWithClass_Standart.py*** Set parameters **GTDDir** and **PredDir** to the Ground truth and predicted instance map folder paths. In addition set parameters **PredDataFile** and **GTDataFile** to the paths of the predicted and ground truth instance category json files. The folder structures and file format should be in the Simple format described in the Simple folder readme file.