

## Code for our SIGGRAPH Paper WallPlan: Synthesizing Floorplans by Learning to Generate Wall Graphs

### 1. Configuration

- Python 3.8
- PyTorch 1.8.1
- Numpy 1.19.2
- Torchnet 0.0.5.1

### 2. Dataset

Due to copyright issues, we are unable to publish our dataset and trained models, so we have only provided a small amount of data for testing purposes. If you want to use the whole dataset, a request should be made to [www.Kujiale.com](http://www.Kujiale.com).

### 3. Training the models

We provide each three training scripts for the only boundary input constraint and the hybrid-constraint. : ``train_WinNet.py``, ``train_LabelNet.py`` and ``train_GraphNet.py`` are to support generation with only boundary constraint. ``train_WinNet_hybrid.py``, ``train_LabelNet_hybrid.py`` and ``train_GraphNet_hybrid.py`` are to support generation with hybrid constraint. The neural networks are described in detail in our paper.

### 4. Synth floor plans

1) Move the trained models into the folder

``trained_model/Boundary_constraint``; These trained models includes:

WindowLiving.pth

WindowOther.pth

LabelNet.pth

GraphNet.pth

2) Now, navigate to ``/test``, and run ``python Boundary_Test.py``. The output floor plan is in the folder ``output``.