

3 task { 1. Depth
2. Surface Normal
3. Instance contour

1.1

Use synthetic images = free annotations for representation learning

advantages { realistic
easier to get annotations

full control of a virtual world

1.2

disadvantage

{ still hard to be differentiated
Annotation still must be provided by
humen, defeat the propose

solution

{ GAN \rightarrow unsupervised feature level domain
adaptation

leverage other free physical cues

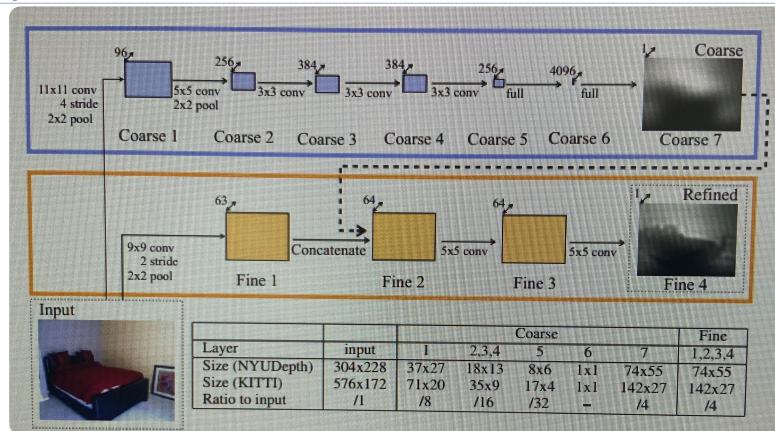
Instance contour Detection

Canny edge detector

high-level ✓

low-level X

Depth prediction



Surface normal estimation

