

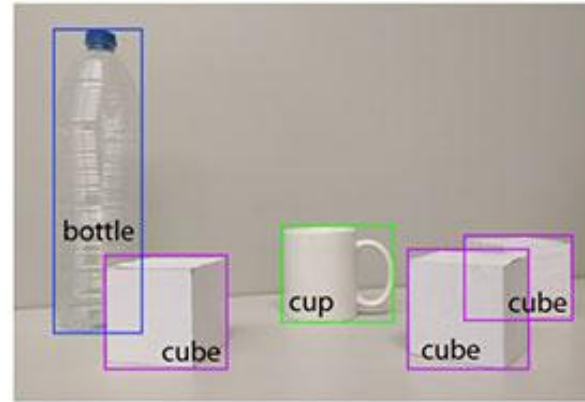
Semantic segmentation

김남범 교수

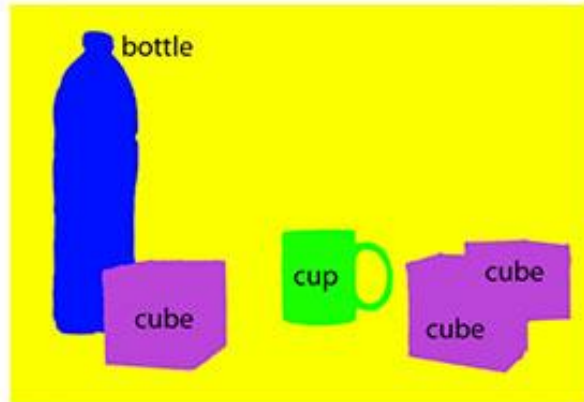
Semantic vs Instance segmentation



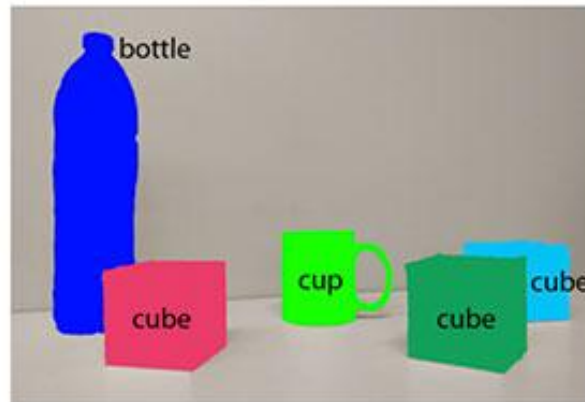
(a) Image classification



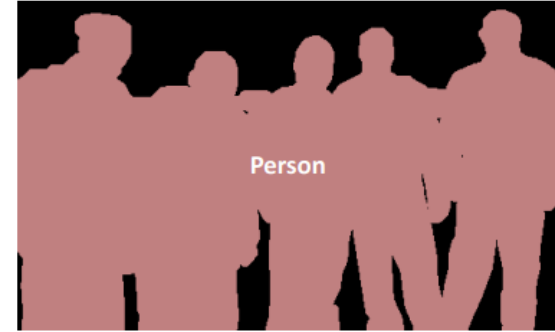
(b) Object localization



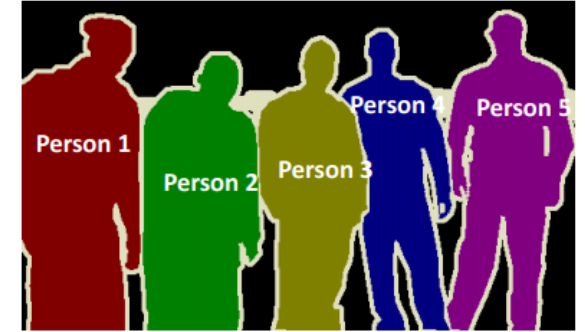
(c) Semantic segmentation



(d) Instance segmentation



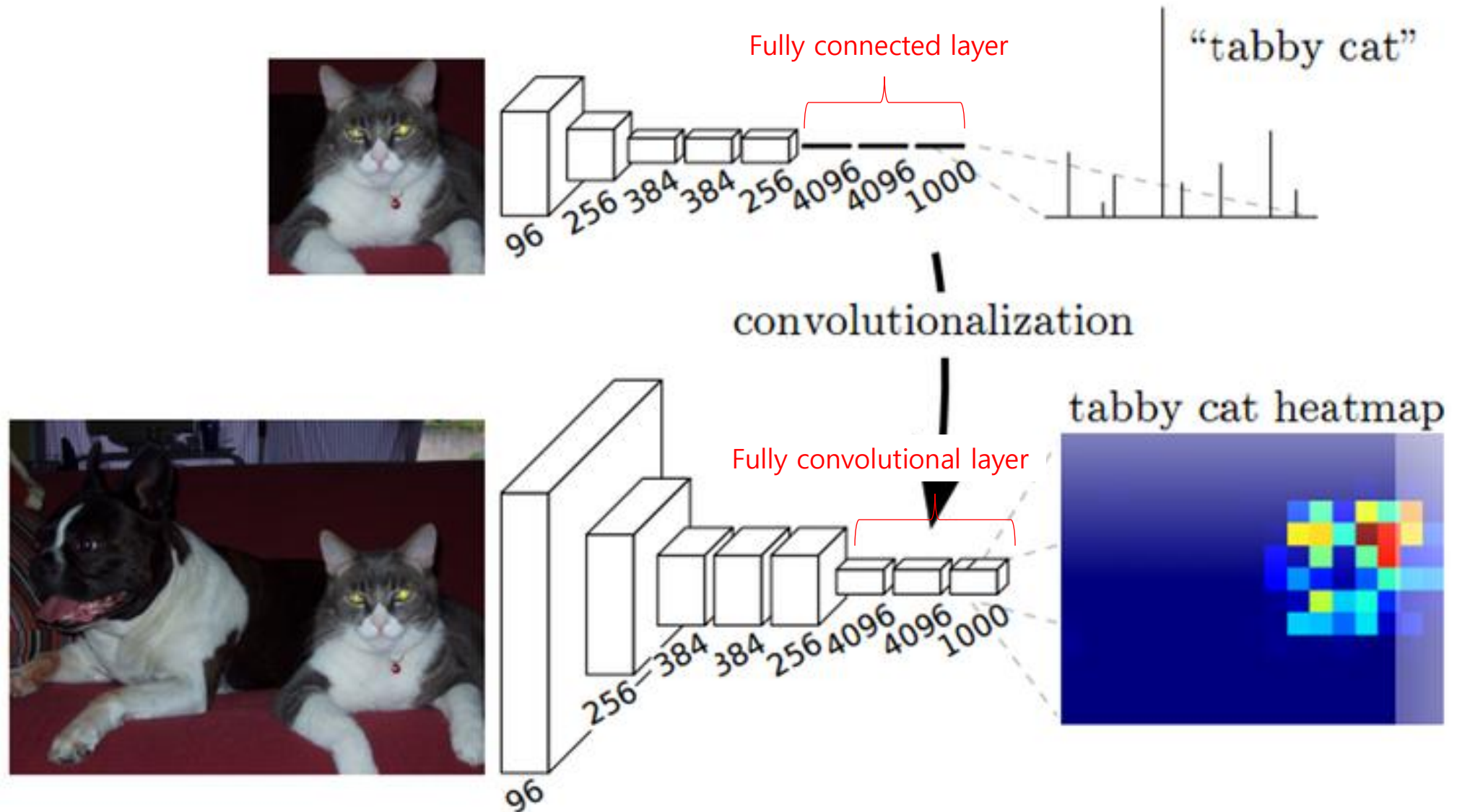
Semantic Segmentation



Instance Segmentation

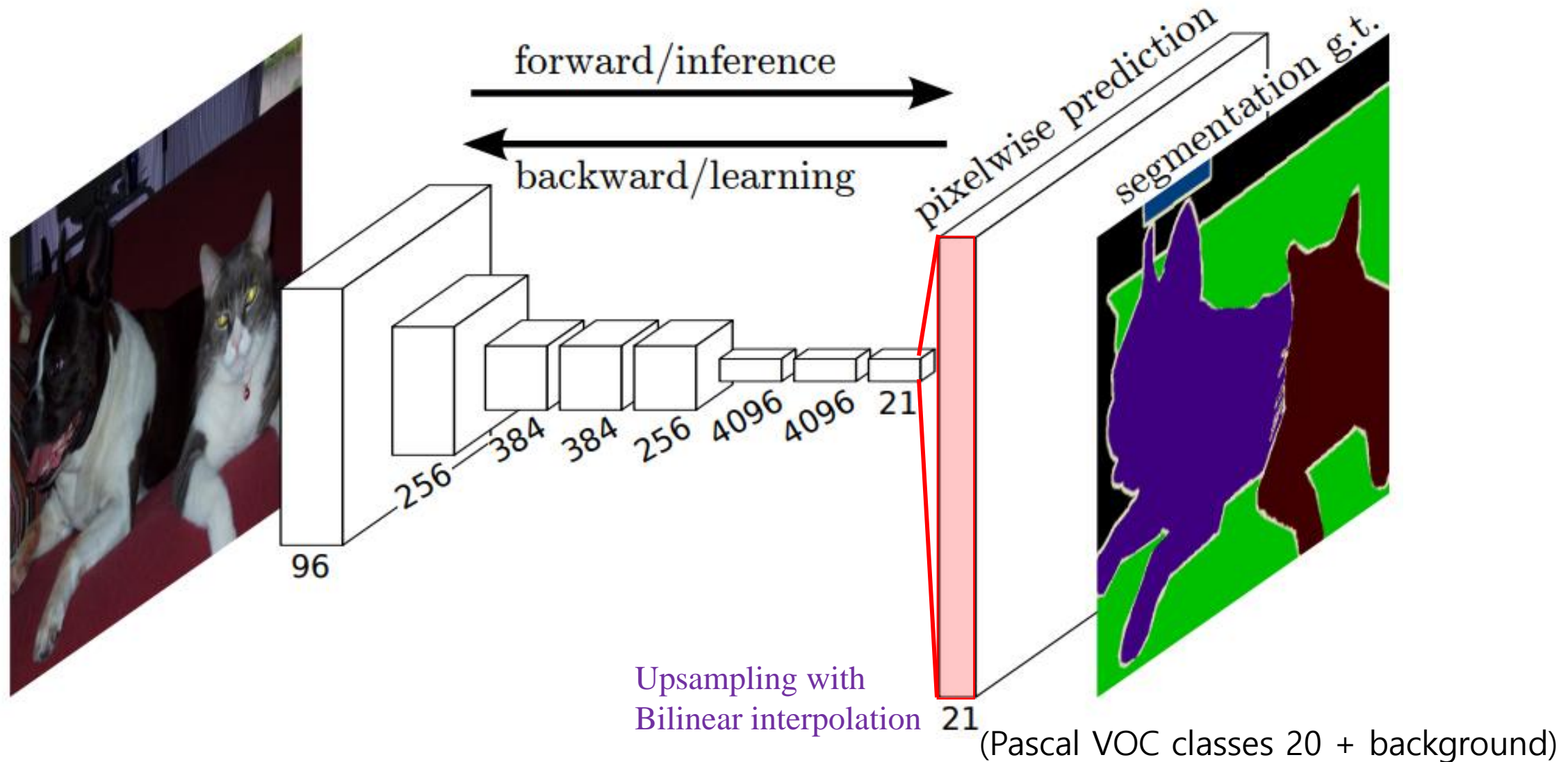


Fully Convolutional Networks for Semantic Segmentation (FCN, 2014)



Upsampling

Dense predictions for per-pixel tasks



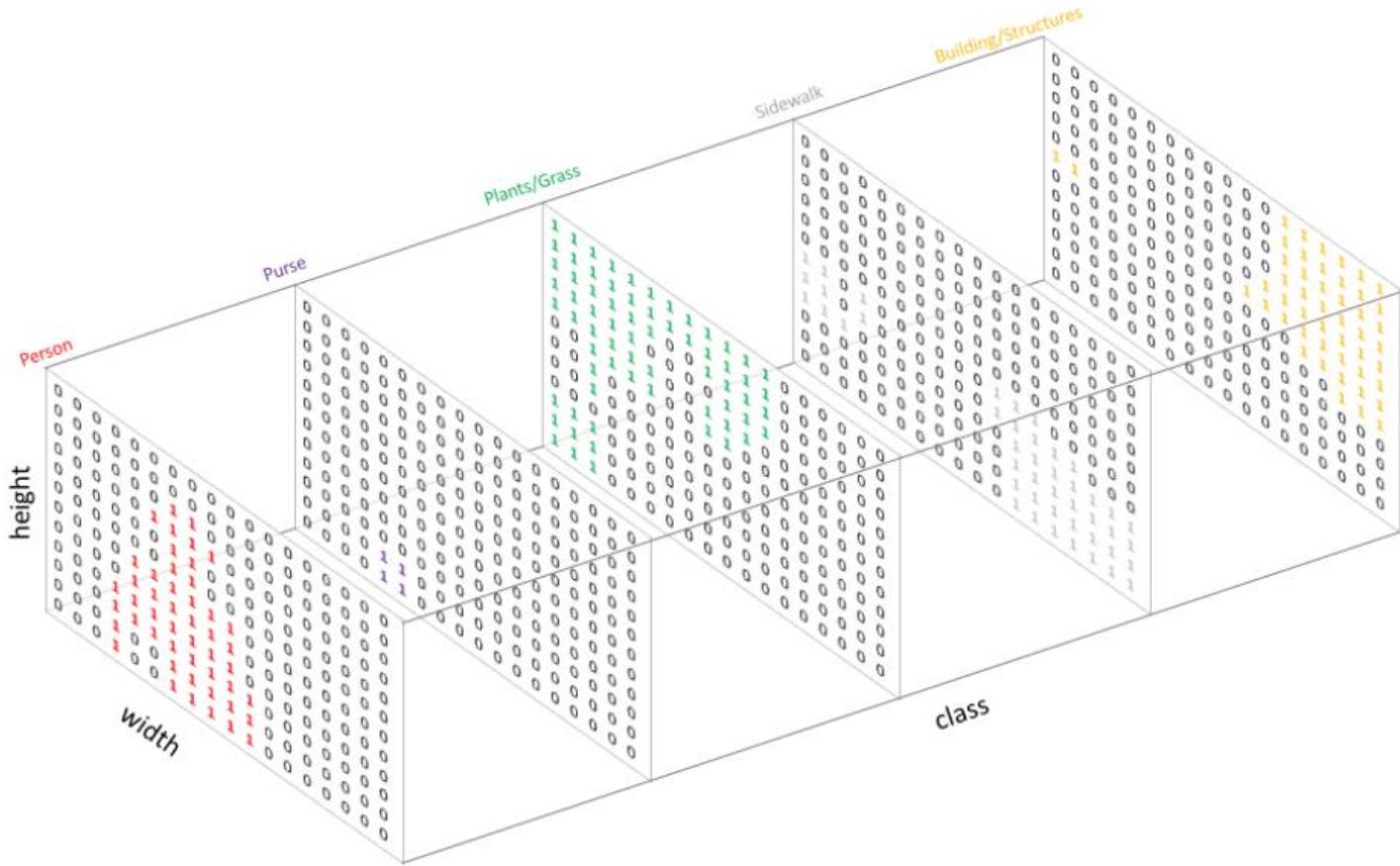
Pixel-wise classification



segmented →

- 1: Person
- 2: Purse
- 3: Plants/Grass
- 4: Sidewalk
- 5: Building/Structures

3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	5
3	3	3	3	3	3	3	3	3	3	3	3	3	3	5	5	5	5	5	5
3	3	3	3	3	3	3	1	1	3	3	3	3	3	5	5	5	5	5	5
3	3	3	3	3	3	3	1	1	1	3	3	3	3	5	5	5	5	5	5
5	5	3	3	3	3	3	1	1	3	3	5	5	5	5	5	5	5	5	5
4	4	3	4	1	1	1	1	1	1	1	4	4	4	5	5	5	5	5	5
4	4	3	4	1	1	1	1	1	1	1	4	4	4	4	4	5	5	5	5
4	4	4	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	4
3	3	3	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	4	4
3	3	3	1	2	2	1	1	1	1	1	4	4	4	4	4	4	4	4	4
3	3	3	1	2	2	1	1	1	1	1	4	4	4	4	4	4	4	4	4



Mask R-CNN architecture (2018)

