Object Detection

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Object Detection

- Find / label all objects in an image
  - Classify and put a box around them
- Most popular sparse labeling task
  - Basis of many computer vision tasks

Datasets: Pascal VOC

- 20 classes
- 11k images
  - 27k objects

The PASCAL Visual Object Classes Challenge 2007 (VOC2007) Results, Everingham et al., 2007.

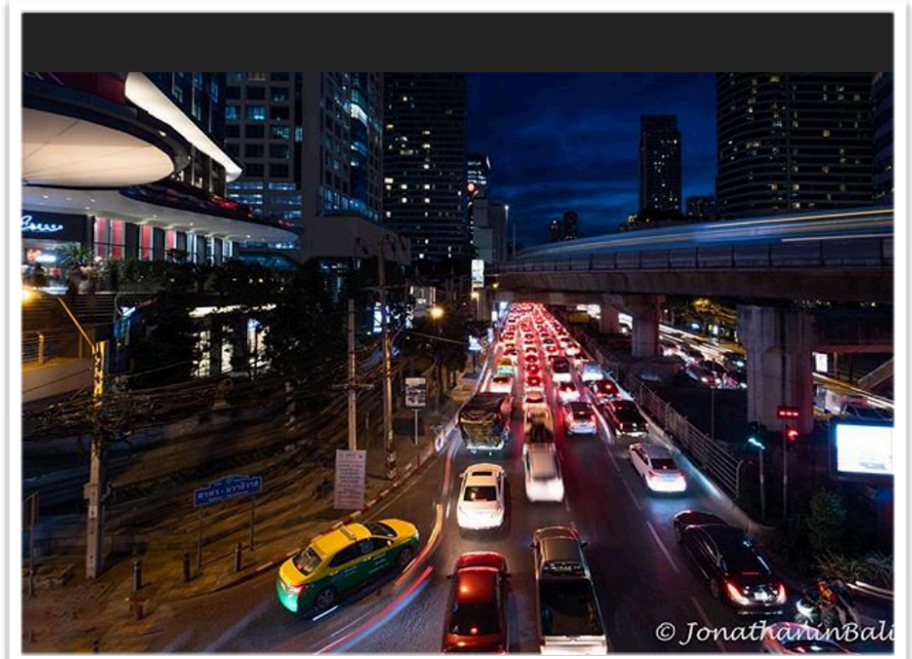
Datasets: MS COCO

- 80 classes
- 200k images
  - 1.5M objects
  - 250k people w. pose

Microsoft COCO: Common Objects in Context, Lin et al., ECCV 2014

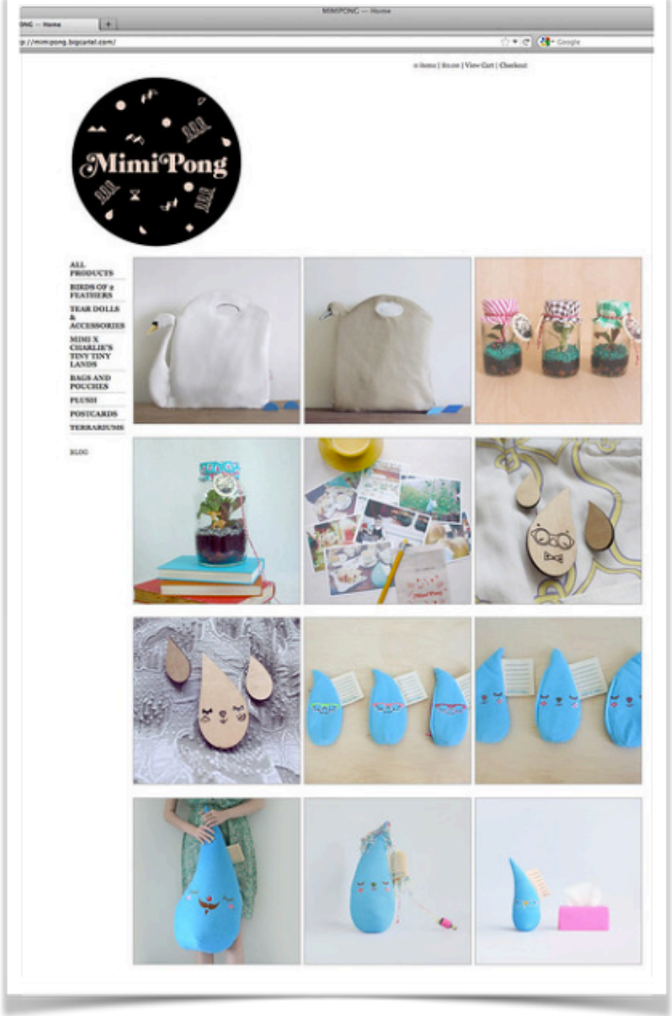
Driving datasets

- 3d object detection and tracking
  - NuScenes
  - BDD100k
  - Mapillary
  - ApploScape



Simulators

- Dataset → Simulation
  - Infinite data
  - Free labels
  - Limited domain
- Examples
  - GTA V
  - Carla
  - Habitat

Applications

- Visual search
- Advertising
- Surveillance
  - 😀 Assisted living
  - 😭 State-sponsored
- Assisted driving