## Virtual Worlds as Proxy for Multi-Object Tracking Analysis A. Gaidon, Q. Wang, Y. Cabon, E. Vig (CVPR 2016)



- Modern CV algorithms rely on expensive data acquisition and manual labeling
- Generation of fully labeled, dynamic and photo-realistic proxy virtual worlds
- Allow to change conditions of the proxy world and to study rare events or difficult to observe conditions that might occur in practice (what-if analysis)
- Efficient real-to-virtual world cloning method validated by creating a dataset called Virtual KITTI
- Accurate ground truth for object detection, tracking, scene and instance segmentation, depth and optical flow
- Gap in performance between leaning from real and virtual KITTI is small
- Pre-training with Virtual KITTI and final training with KITTI gave best results (virtual data augmentation)