3D Bounding Box Regression

Project Progress Report

이지민

Overview

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Objective

3D bounding box regression 성능 향상

새로운 방법을 구현 하기 위해 기존 방법들 조사

Paper Reviews

3D Bounding Box Estimation Using Deep Learning and Geometry

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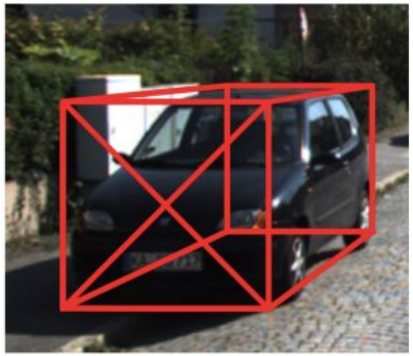

Objects as Points

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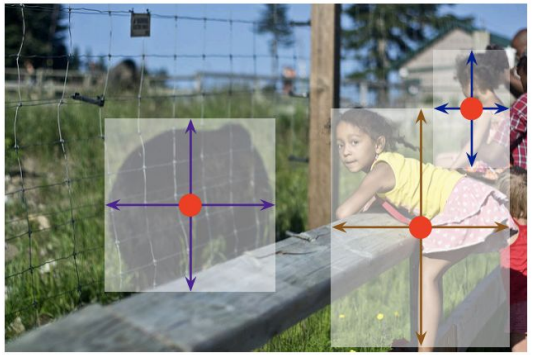
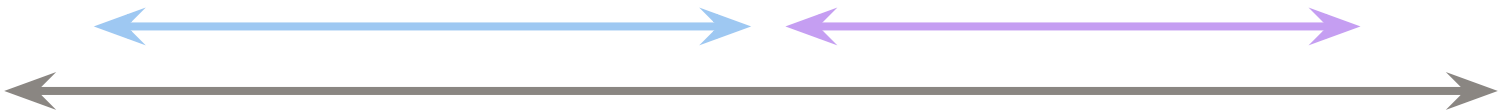


Timeline

Open source에 있는 모델들을
KITTI dataset에 train + test 시키기

3D bounding box regression
구현 및 학습하기



June July August

Milestones Achieved

1st Week 6/20-6/24	• 2D object detection - Faster R-CNN 논문 공부 • 3D bounding box regression 논문 공부
2nd Week 6/27-7/1	• 2D mmdetection (open source)에서 주어진 Faster R-CNN model을 COCO dataset에 inference, mAP evaluation • “3D Bounding Box Estimation Using Deep Learning and Geometry” Paper Review

Milestones Achieved

3rd Week 7/4-7/8	• Faster R-CNN model을 COCO dataset에 training, testing • KITTI dataset annotations를 COCO dataset annotations format로 변환시키는 방법 조사 • 3D bounding box regression 논문 공부
4th Week 7/11-7/15	• 2D mmdetection 코드 공부 • kitti2coco.py 스크립트 작성 (진행 중) • “Objects as Points” Paper Review

Results


bed|0.95
bowl|0.61


traffic light|0.94
traffic light|0.60
person|0.94
bus|1.00
Metrocentre
via Bens 96
person|0.99
person|1.00
South Tyne
NA52 BUU

Milestones Remaining

5th Week 7/18-7/22	• Faster R-CNN model을 KITTI dataset에 training, testing • 3D bounding box regression 논문 공부
6th Week 7/25-7/29	• 기존 3D bounding box regression 방법 공부, 개선할 점 찾기 • Paper Review
7th Week 7/25-7/29	• 기존 3D bounding box regression 방법 개선, 구현하기
8th Week 7/25-7/29	• 구현한 3D bounding box regression 방법으로 학습하기 • Paper Review

Thank you!

감사합니다! Q & A