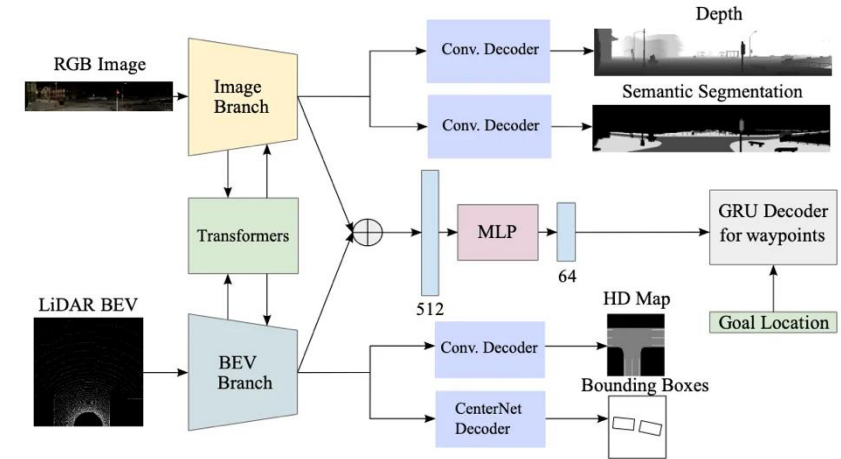# BEV Feature

Plan A. BEVFormer 사용

Plan B. Latent TransFuser 업그레이드
    a. Camera Panorama view 확장
    b. Temporal 정보 활용

statistics that are not feasible via the CARLA leaderboard.
    Our study has several limitations. We have provided a simple solution to the inertia problem (creeping), but this deserves more study. Due to the sensor limits of the CARLA leaderboard, our sensor setup does not generate data from the rear of the vehicle, which is relevant in lane change situations. We only investigate single time step input data in this work. Processing temporal inputs is likely necessary to reduce vehicle collisions in intersections by enabling estimation of the acceleration and velocity of other traffic participants. We do not investigate the impact of latency
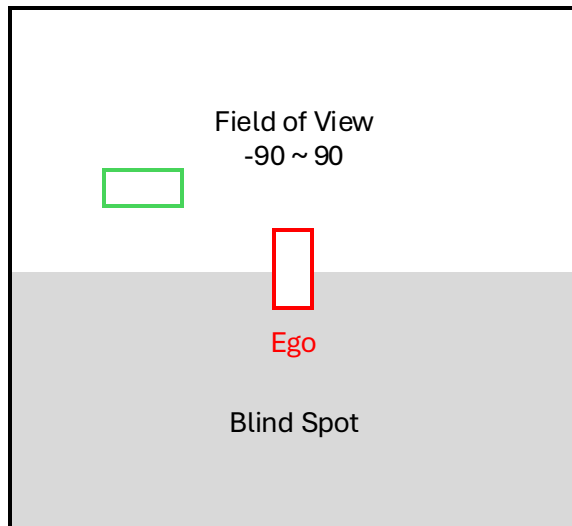
Plan B. Latent TransFuser 업그레이드
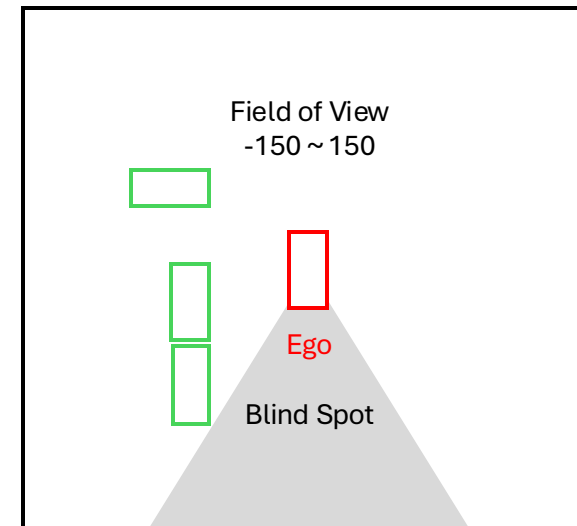
1. Camera Panorama View 확장

기존: l0 + f0 + r0

확장: l2 + l1 + l0 + f0 + r0 + r1 + r2

Field of View
-90 ~ 90

Ego

Blind Spot

Field of View
-150 ~ 150

Ego

Blind Spot

```
Finished running evaluation.
    Number of successful scenarios: 220.
    Number of failed scenarios: 0.
    Final extended pdm score of valid results: 0.47865149651026045.
    Results are stored in: /home/pdl-kaden/navsim_workspace/exp/lat_
```
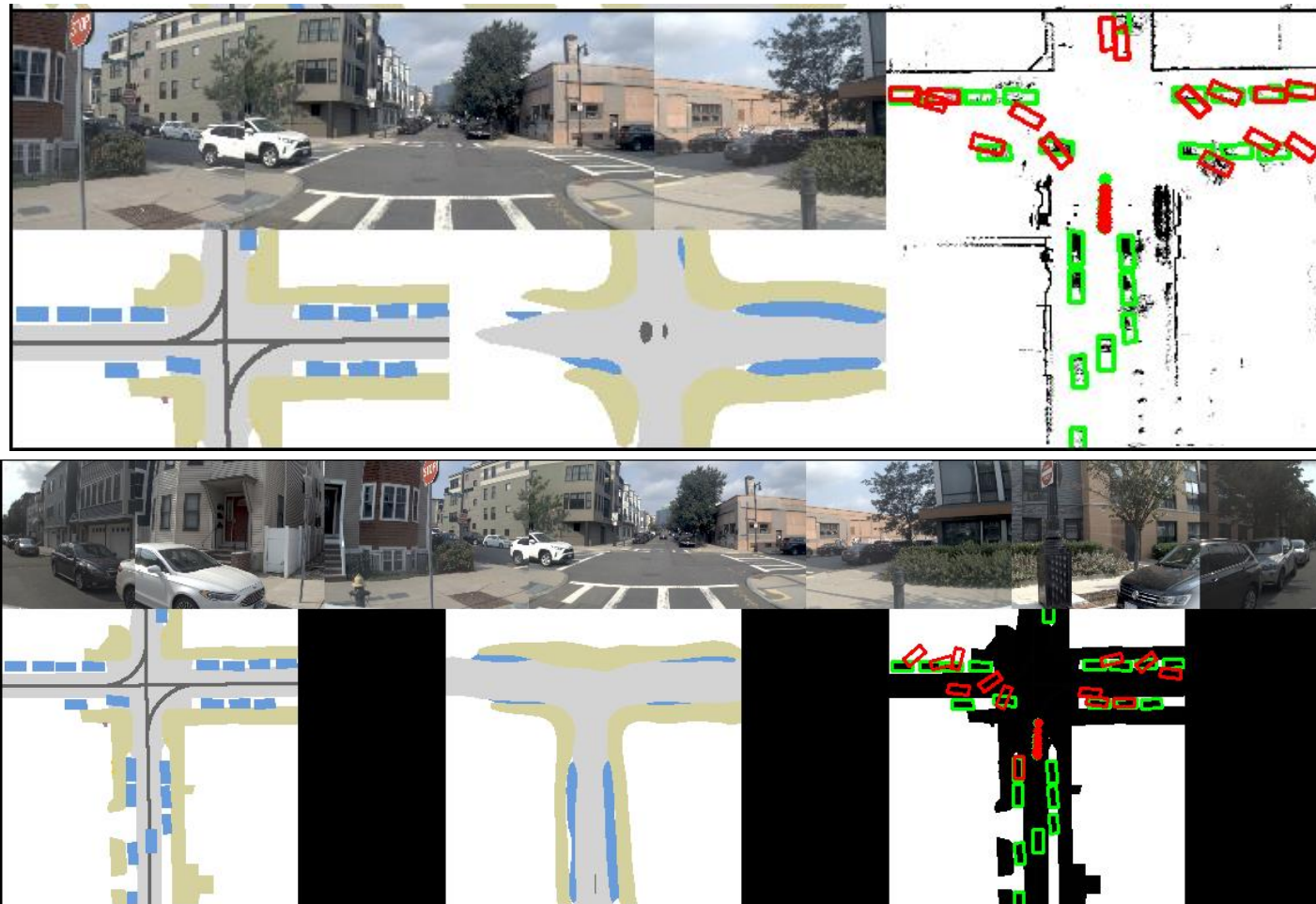
```
Finished running evaluation.
    Number of successful scenarios: 220.
    Number of failed scenarios: 0.
    Final extended pdm score of valid results: 0.5069345293011261.
    Results are stored in: /home/pdl-kaden/navsim_workspace/exp/pseud
```

Plan B. Latent TransFuser 업그레이드
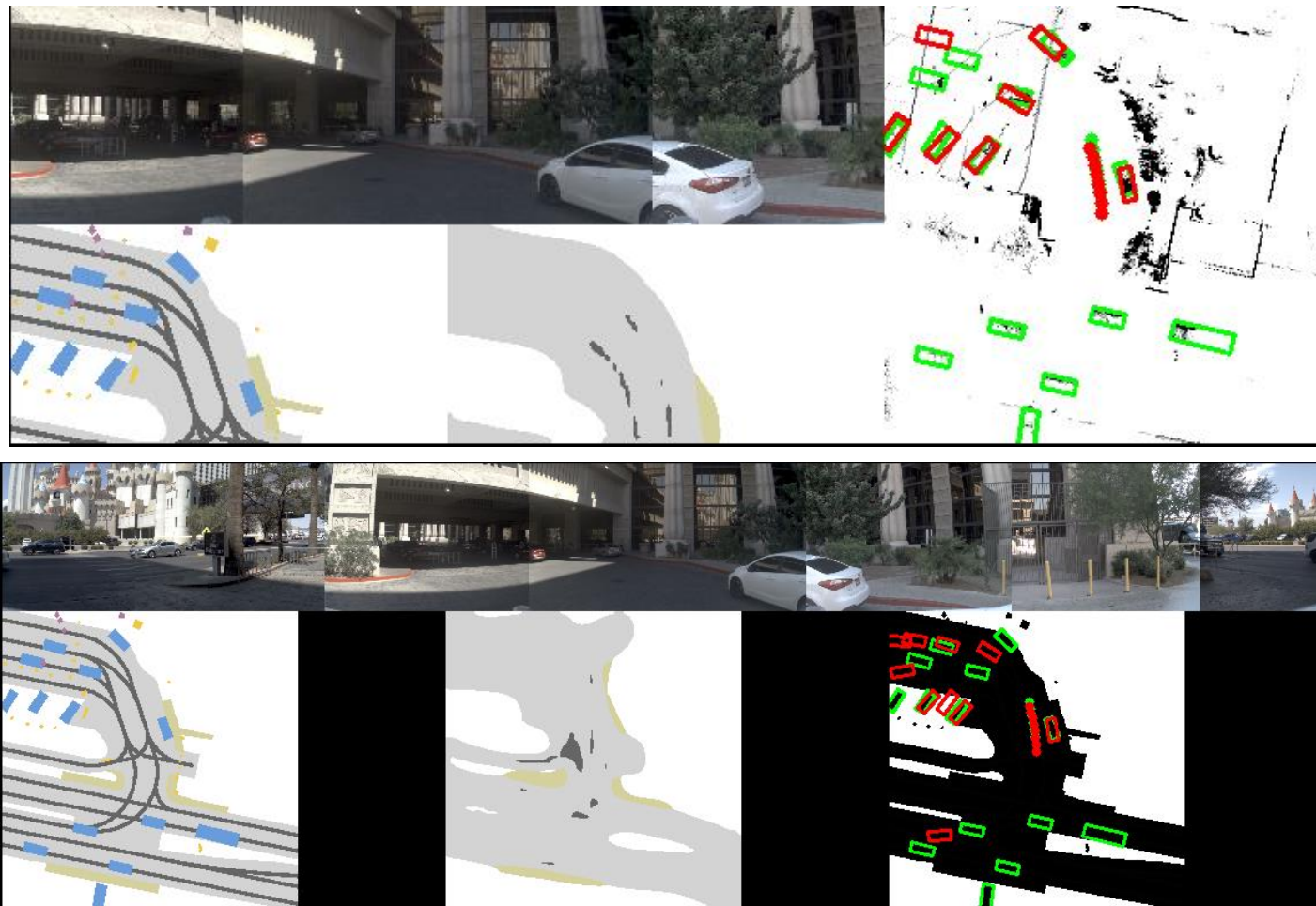
1. Camera Panorama View 확장

Sample
Result
(Training Set)

Plan B. Latent TransFuser 업그레이드

1. Camera Panorama View 확장

Sample
Result
(Training Set)

Plan B. Latent TransFuser 업그레이드

2. BEV Feature Map의 Temporal 정보 활용

RGB Image

LiDAR BEV

TransFuser

176 x 40 x 72   88 x 20 x 216   44 x 10 x 576   22 x 5 x 1512   **Image Branch**

Transformer   Transformer   Transformer   Transformer

AvgPool + FC

64 x 64 x 72   32 x 32 x 216   16 x 16 x 576   8 x 8 x 1512   **BEV Branch**

AvgPool + FC

Self-Attention

x L

H_1 C_1 W_1

H_2 C_2 W_2

512   MLP   64

δw_1 δw_2 δw_3 δw_4

GRU   GRU   GRU   GRU

$(0, 0)$ w_1 w_2 w_3

Goal Location