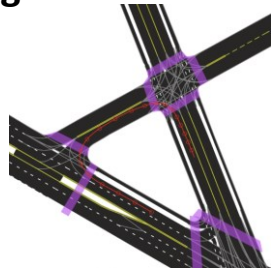


# Input

## Object Detection



## High Definition Map

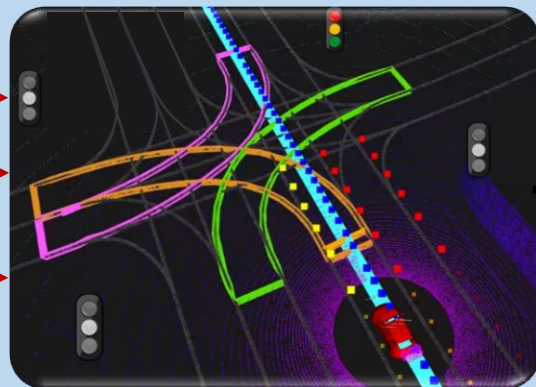


## Ego-vehicle status



ROS

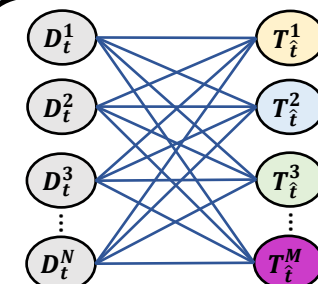
Monitored Lanes-based  
Attention Module



Most relevant  
Detections  
 $D_t$

SmartMOT

Data Association



State Prediction  
 $T_{\hat{t}}$

$\{T, D\}_{matched}$

State Update

BEV Kalman Filter

$T_{t-1}$

$T_t$

Matched Trackers

$T_{new}/$   
 $T_{lost}$

Birth & Death  
Memory

$\{T, D\}_{unmatched}$

CTRV uni-modal  
prediction

Use Cases &  
Collision evaluation

