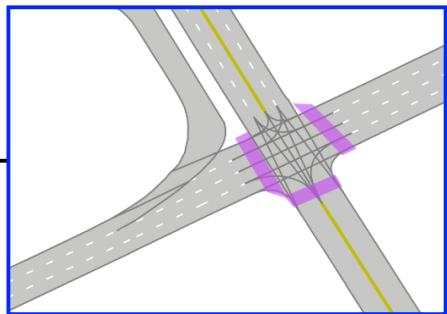
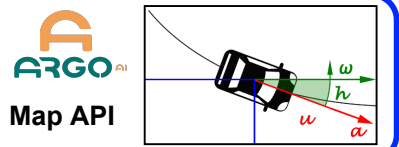


INPUTS

HD Map



Physics-based
Heuristics



Agent Past Trajectories



T_0
 T_{-1}
 T_{-2}
 T_{-3}
...
 T_{-n}

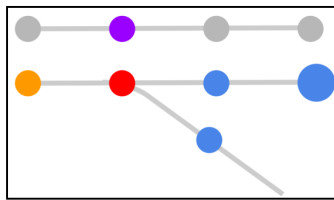
Δv

Lanes Proposals

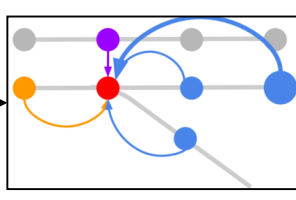
Concat

Map Encoder

Build Graph



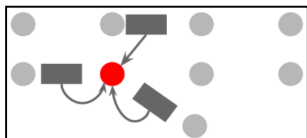
LaneGCN



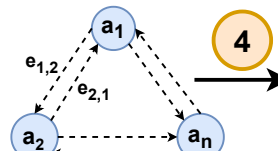
Fusion Cycle

Latent graph

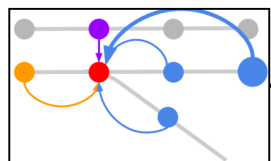
Attention
(Actor to Lane)



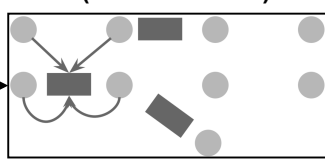
Crystal-GCN
(Actor to Actor)



LaneGCN
(Lane to Lane)



Attention
(Lane to Actor)



Social Encoder

Latent actors

Positional Encoding

Encoder Layer

Linear
Encoder

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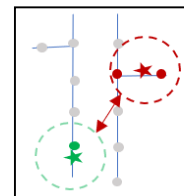
+

+

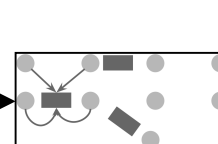
+

Goal Areas estimation

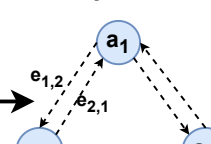
Estimate goals
and context



Add deep context
to actors



Actor to Actor
update

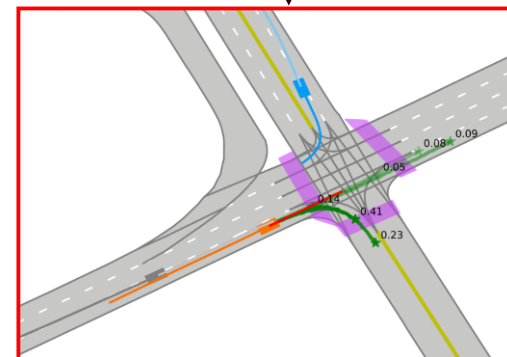


Latent actors with
deep area context

Multimodal Decoder
(Regression & Confidences)

Preliminar
multi-modal predictions

Motion
Refinement



Refined
MultiModal trajectories