Start

Check if actor in the same lane as ego

No

Categorize actor into right or left lane

Yes

No

Check if actor in front of ego

Calculate Time To Collision (TTC) for each actor

Ignore the actor

(backside of ego)

Yes

Yes

Yes

Safety Check

TTC > Threshold & Rel vel>=0

No

No

Lane available & Safety Check

No

No

Yes

Yes

Front actor Vel < Ego Vel < Desired Vel

Lane available ?