System Architecture

Situation Analysis

Collision Avoidance

- Comparison of host vehicle’s max. reachable sets with predicted obstacle position while passing
  - coefficient of friction dependent lat. acceleration
  - environment dependent time of counter steering

Collision Mitigation

- Comparison of target collision position with predicted positions for different $\gamma$

Decision Making

Decision Tree for Maneuver Initiation

Validation of Trajectory Prediction

Use-Cases

Potential Use Cases for Evasion Maneuver at Crossings in Urban Scenarios

$n=326$

- Braking: 58.0%
- Evasion - CA: 42.0%
- Evasion - CM: 25.8%
- No Intervention: 10.7%
- Shifting of target collision point more to the front of the obstacle