

Autonomous Vehicle Lane- Merging

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Agenda

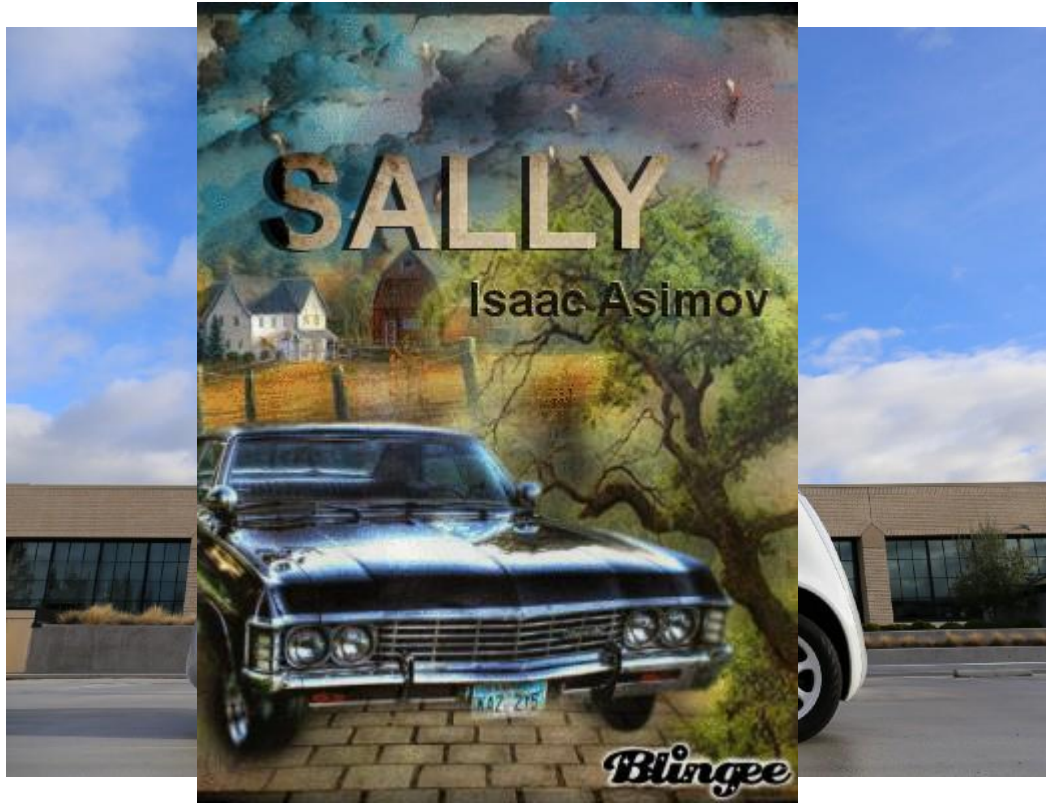
Introduction

Why autonomous vehicles?

AIM

Lane Merging

Introduction



Why autonomous vehicles?

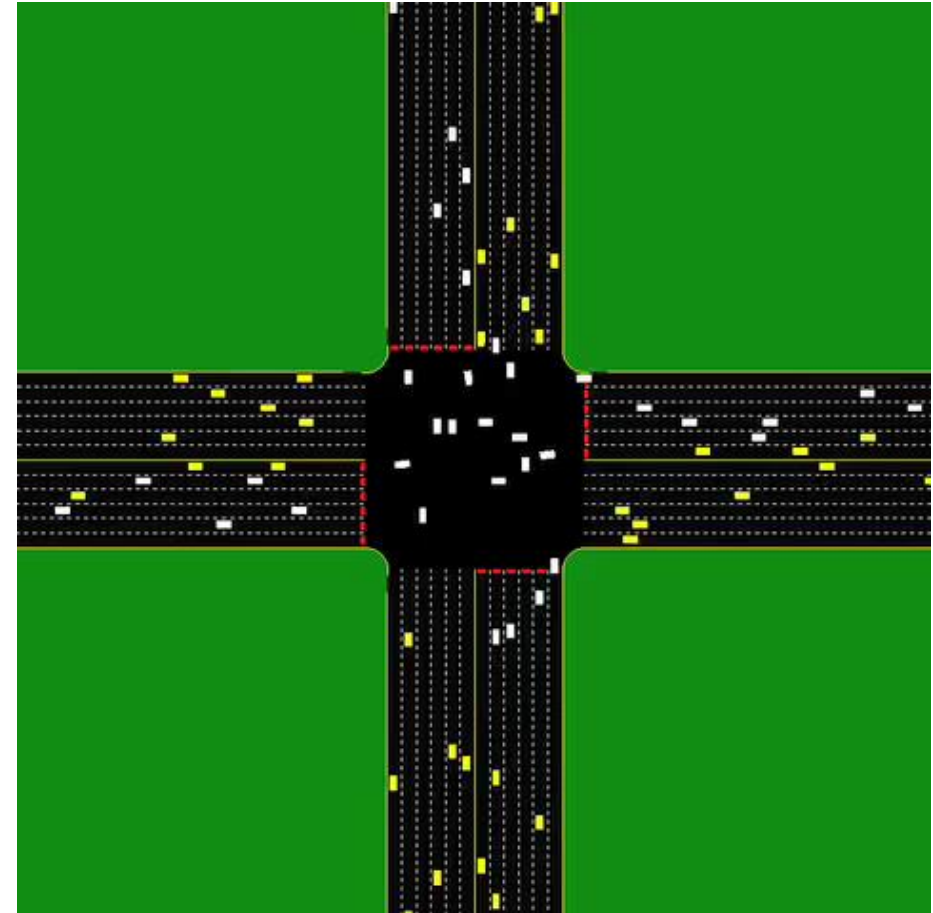
- Safety
 - Thinking distance
- Efficiency
 - 10% more fuel efficient than current EPA fuel economy test results
 - Reducing “traffic shock”
- Convenience

Typical Stopping Distances



AIM

- Simulator for modelling intersections
 - Works better than traffic lights
 - Almost as good as an overpass



Lane Merging

- Focus for this project
- Lots of issues
 - Speed of vehicles in the main lane
 - Volume of vehicles in joining lane



Centralised vs Decentralised

- V2I communication
 - Centralised in one place
 - Not reliant on multiple vehicles
 - Easy point of contact
 - Single point of failure
- V2V communication
 - Decentralised
 - Vehicles can think for themselves.
 - Possible range issues