UNIVERSITY of SOUTH FLORIDA

Dynamic Trajectory Control of Mixed Traffic Based on Reinforcement Learning

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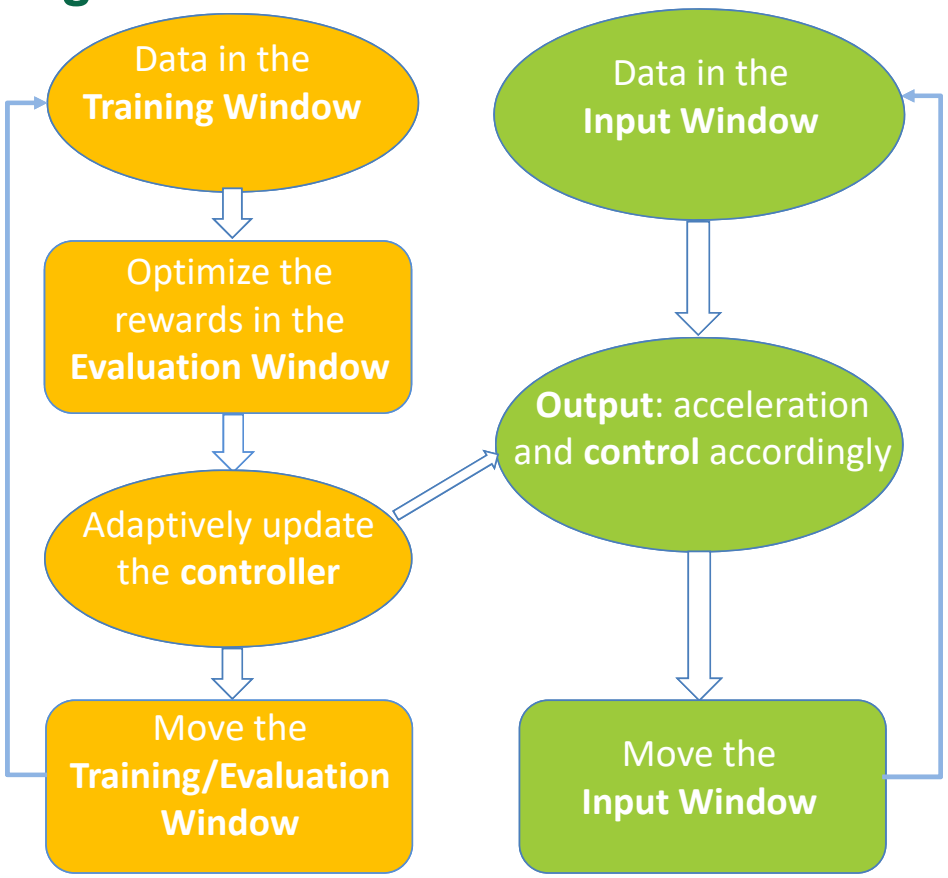
Why we should be interested

Connected Automated Vehicles (CAV)

- Drive like a human
- Drive better than a human: trajectory control
  - Objective: smaller acceleration + smaller gap

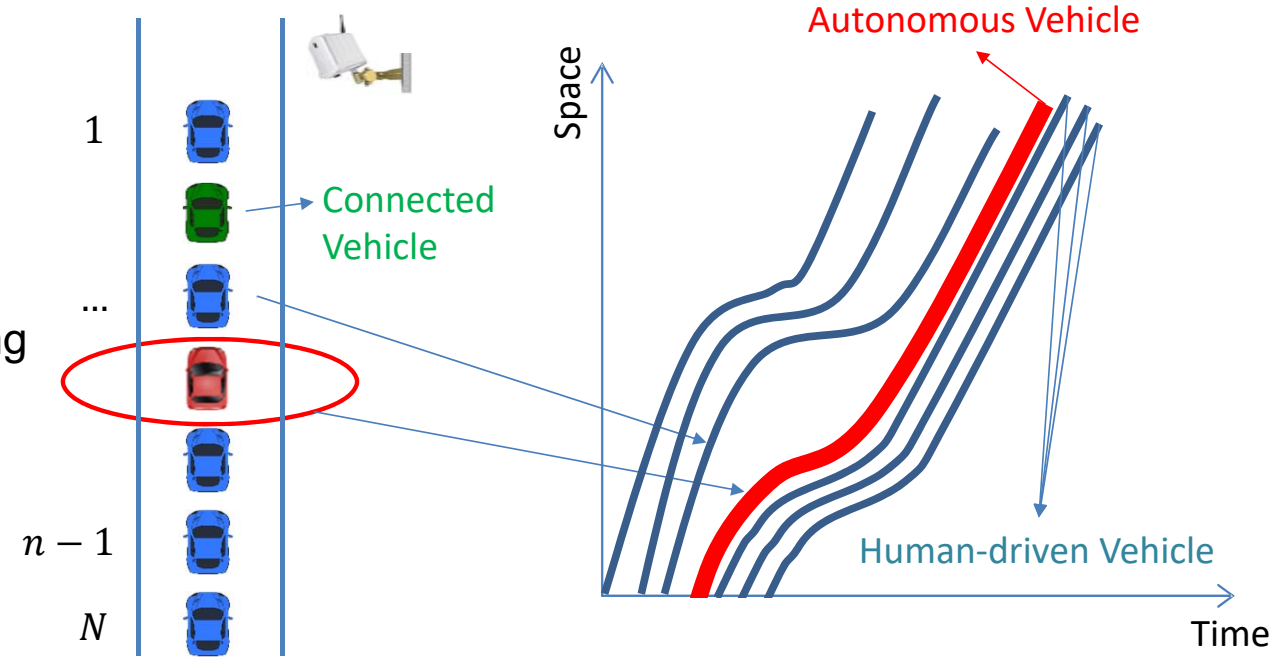
What objectives we are achieving

- Use whatever you have
- Change whenever you need
- Generate whatever you want



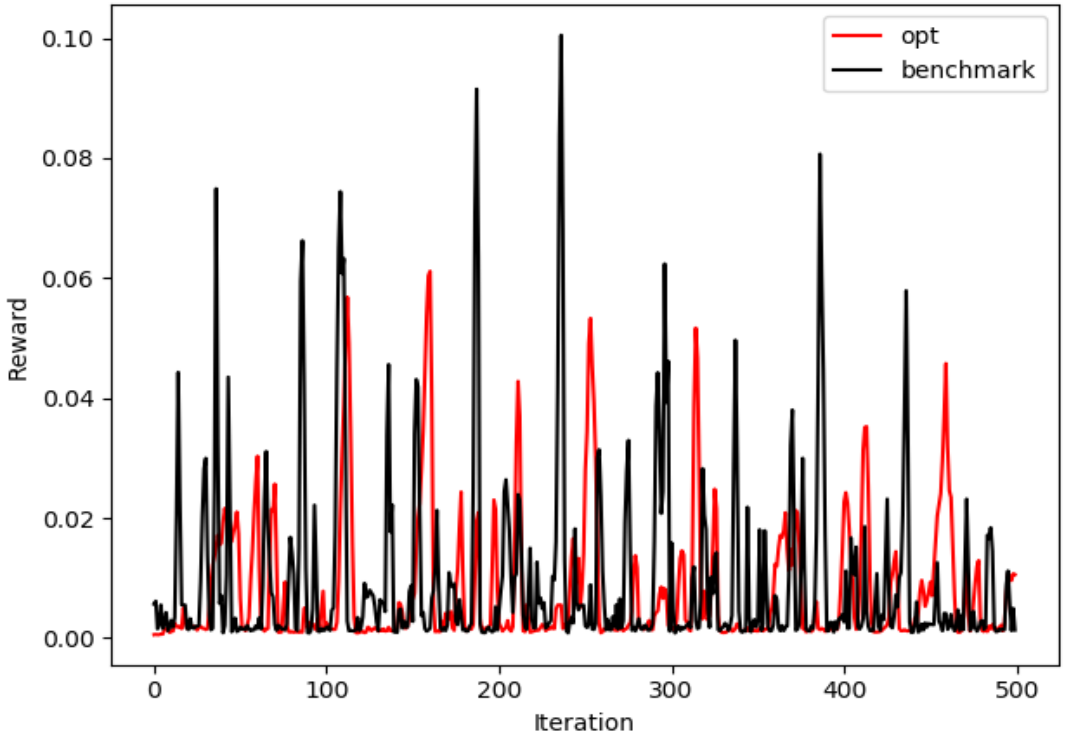
What problem we are investigating

- Mixed traffic
- Individual control
- Single lane, without overtaking or lane-changing



Why you can trust me

- 12 vehicles
- Example results
  - Performance: improved by 18.3%
  - Computation time: 0.4s on CPU



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