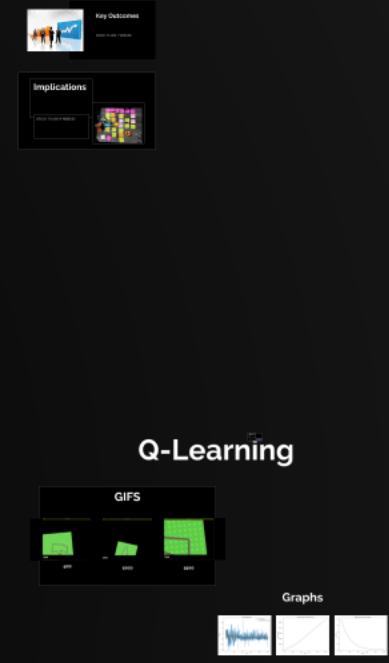




FAI Final Project

Race Track AI Project



Roadmap

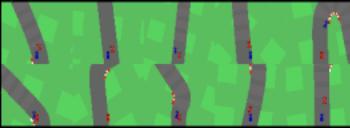
Where we started

- Focus on the environment
- Linux based
- Gazebo environment
- 3D
- Robot Operating System



Where we ended up

- Focus on the model
- Gymnasium environment
- Platform independent
- 2D



Scope and importance

Even though you couldn't trash Browser anymore, this setup was great at demonstrating how powerful Reinforced Learning can be



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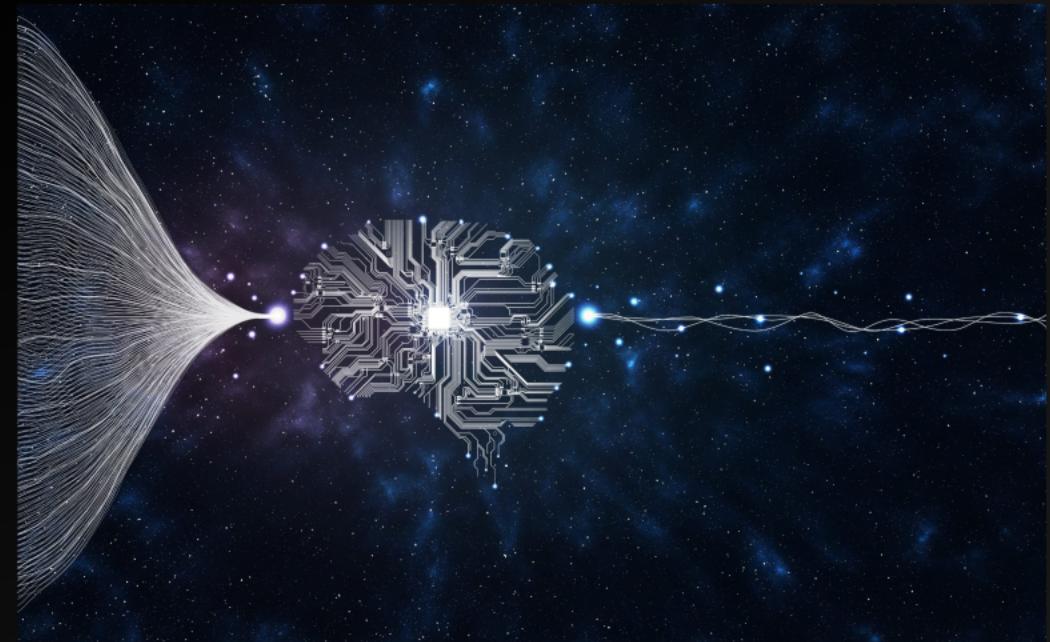
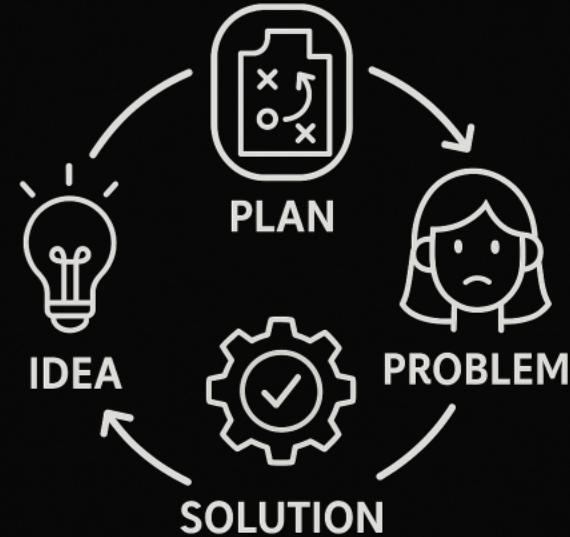
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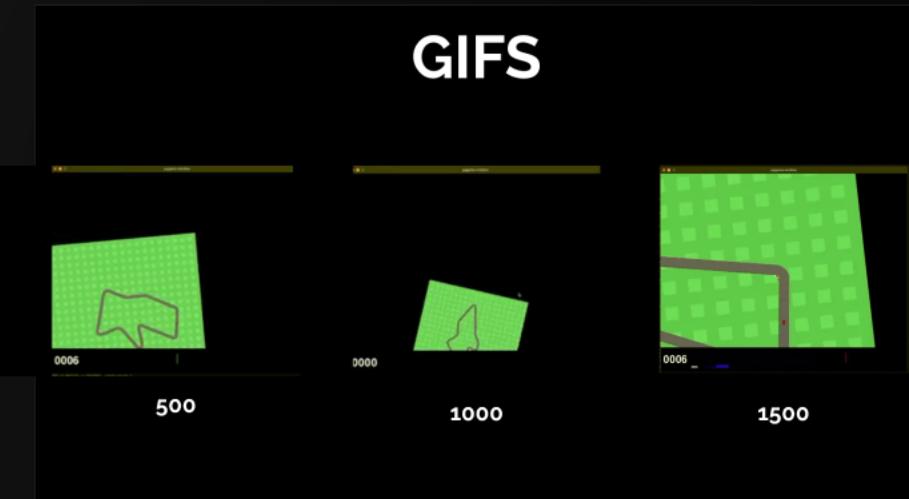


Scope and importance

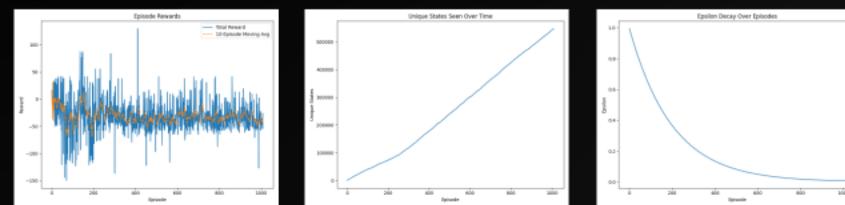
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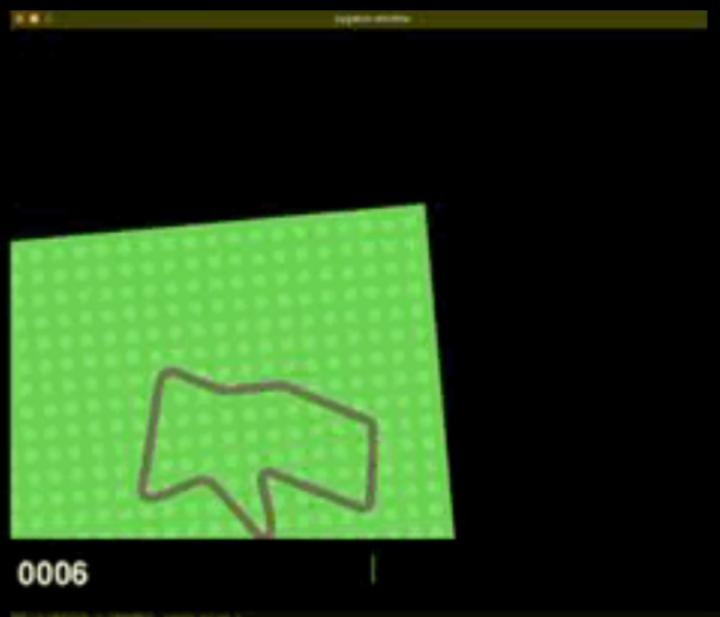
Q-Learning



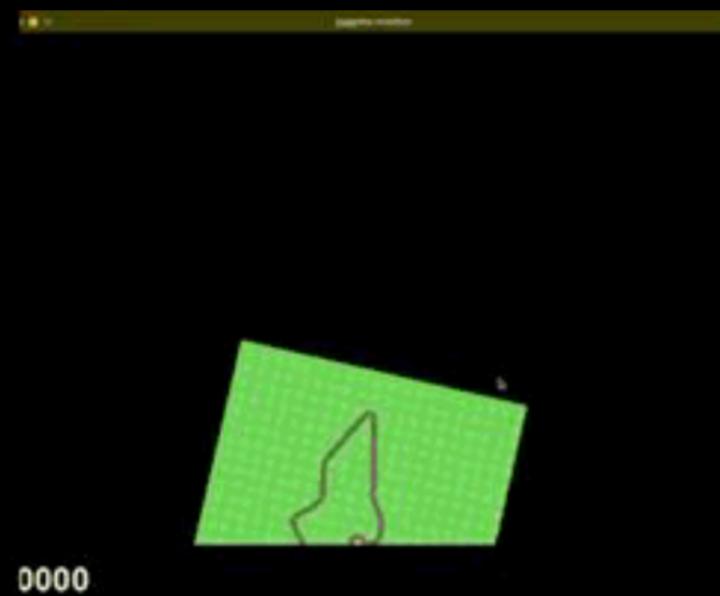
Graphs



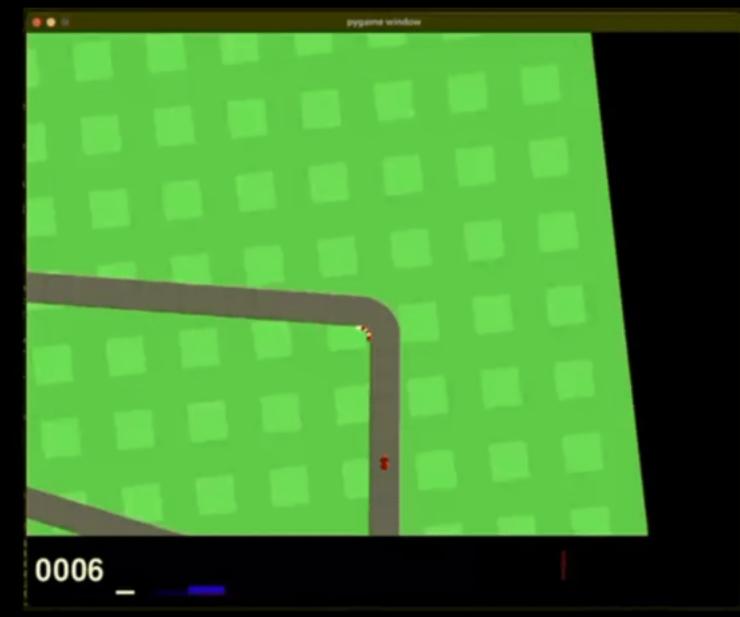
GIFS



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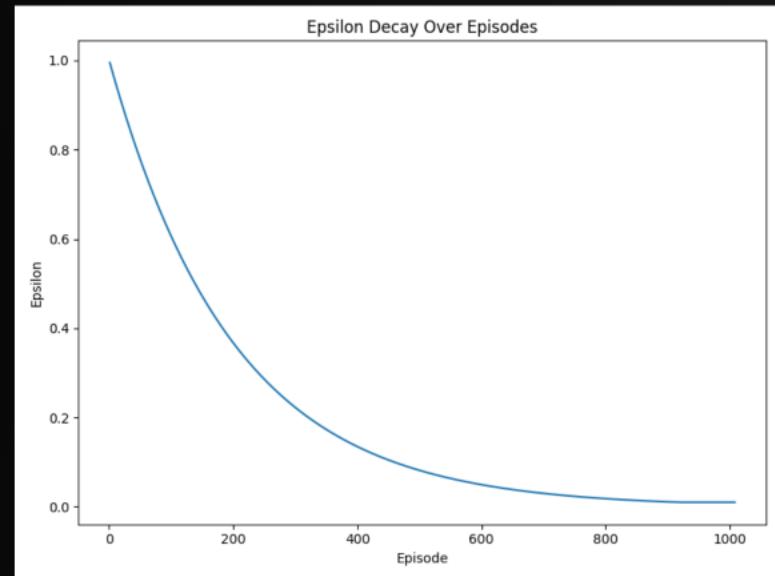
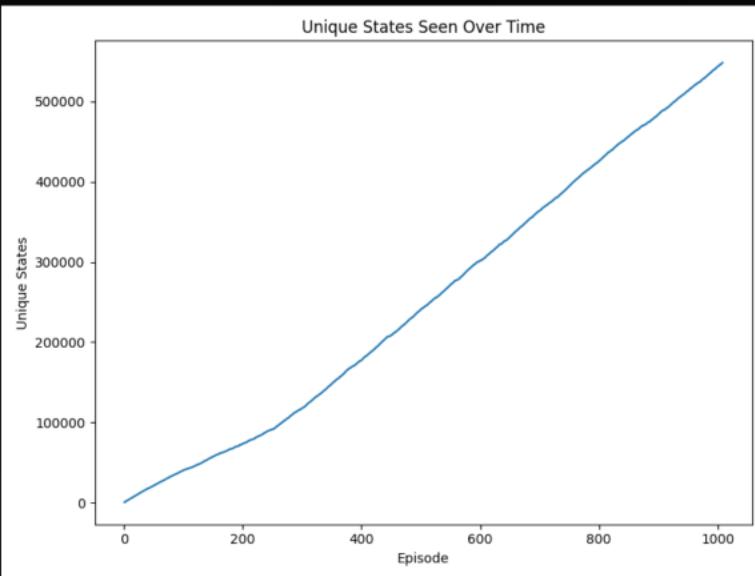
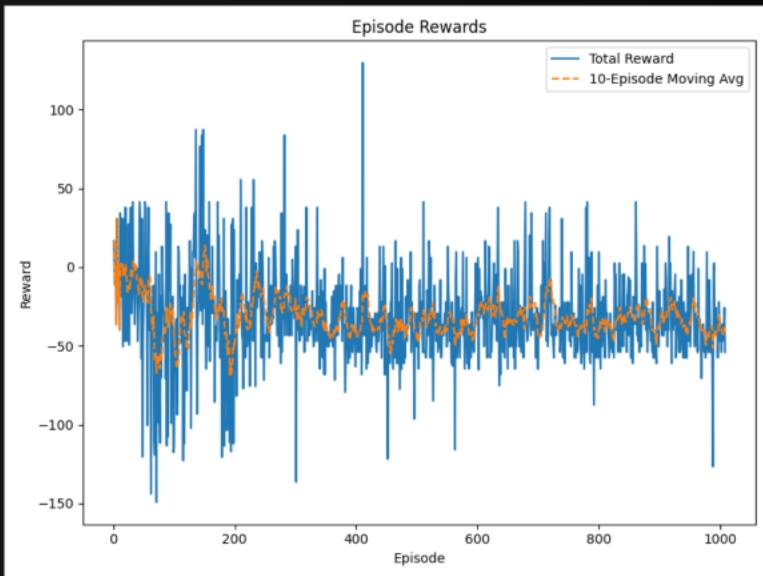


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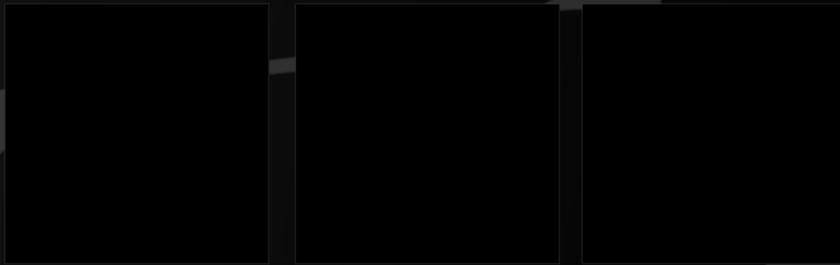
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Graphs

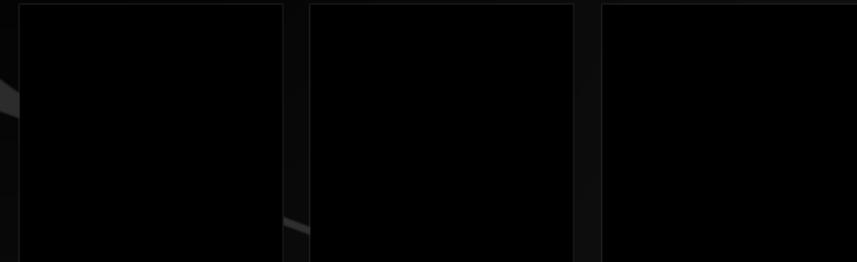


DQL-Learning

GIFS



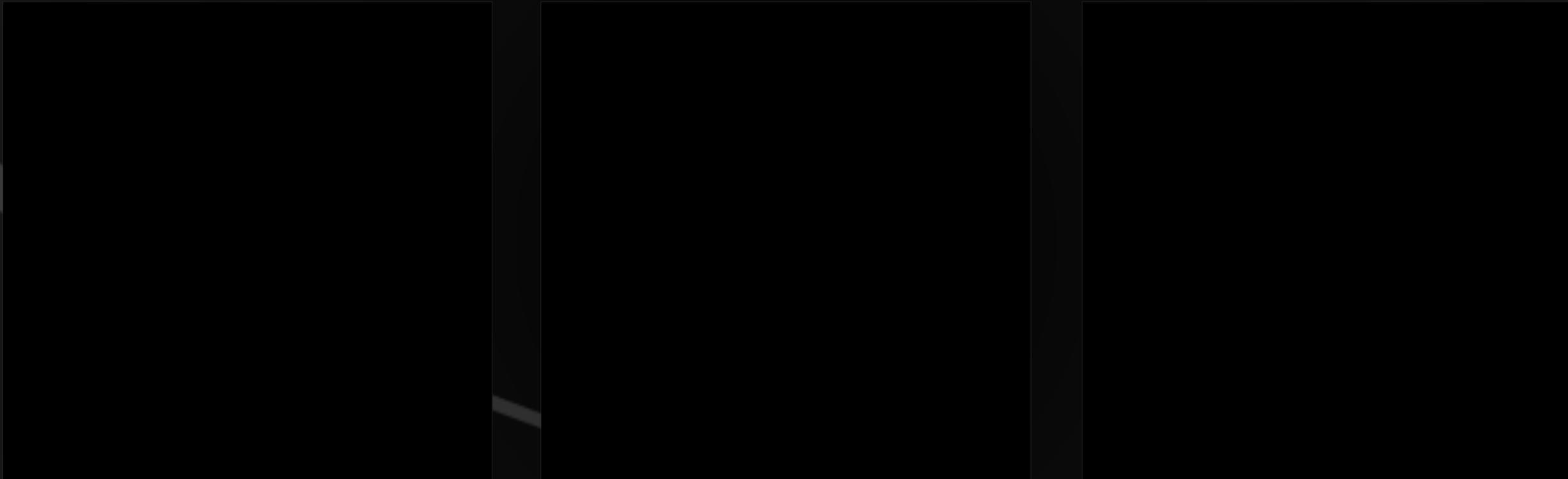
Graphs



GIFS



Graphs



Conclusion

Q-Learning is great and simple but
not for this type of projects.
DQL is very powerful but requires
more careful engineering



KAHOOOOOOT