Performance Evaluation project: Optimizing cars' trajectory with AI

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Part I
Introduction

The goal of this project is split into five parts:

- Creating racing car environment to simulate simple 2D racing car model
- Implementing Deep Q-learning and Genetic algorithms to optmize the behaviour of a car on trakcs so that the car can have the best trajectories possible.
- Evalute the performances of Deep Q-learning and Genetic and compare them.
- Evalute the performances of Deep Q-learning depending of the hyperparameters.
- As a bonus: evaluate the performance of our best car's behaviour.

Part II

Deep Q-learning

Part III

Genetic algorithms

Part IV

Car Racing environment

Part V

Performance Evaluation