**Must do**

1. A graphical user interface.
2. A 2D model car that can run and change direction.
3. The user is able to change the car via a keyboard.
4. A road-builder which user can build all different kind of road (planar, no change of height)
5. A speed and direction monitor which is able to show the current speed, turning direction, acceleration, and braking status.
6. A few (at least 3) distance sensors on the car which can show the distance between the wall and the car (from the sensor).
7. An AI model which is able to control the model car and not crash.
8. The AI needs to lead the car to the destination.
9. Some preset map which for the AI to be trained and demonstrated.
10. A trained AI model, so the effect of AI can be immediately shown.

**Could do**

1. The friction of the road can be change, so braking distance, and turning sensitivity will be affected. This is to see how the car perform on different roads.
2. The maximum detecting distance can be change and might have some sudden erroneous input. This is to see how the AI perform on different weathers.
3. Avoid the overfitting of the model on a particular road, so the AI could be trained on different preset maps, instead of focusing on one map.
4. Use another model of AI to see how 2 models compare.
5. An auto road building algorithm.

**Won’t do**

1. The car and road won’t be 3D.
2. The sensor won’t be able to take image of the road.
3. The AI won’t be able to analyze the image, but only distance.
4. The user won’t be able to control the car via a Xbox controller.
5. Sound effect, like engine sound, braking sound, crashing sound won’t be added.