Please find below the steps to execute the program successfully:

* Clone or Download the tensorflow repository: https://github.com/tensorflow/models
* Extract the downloaded repository
* Follow the steps in this link to install all the required components to get the object detection module working: https://github.com/tensorflow/models/blob/master/research/object\_detection/g3doc/installation.md
* After successfully installing all required components based on the instructions navigate to /models/research/object\_detection/ and paste the two python files called
* vehicle\_detector.py
* grabscreen.py
* Install the following python packages
* tensorflow or tensorflow-gpu
* jupyter
* matplotlib
* pillow
* lxml
* opencv-python (imported as cv2)
* numpy
* Open the game (GTA 5) -> Settings -> Display -> Change to windowed screen and set screen resolution as 800x600 (CPU) maybe higher if executed on GPU
* Move the game window to the top left corner of the screen
* Open vehicle\_detector.py and run the code
* Wait for the Opencv window to open (might take a while depending on system processing power)
* Once open, move to the game and stand on the road and notice the following:
* Object detection
* The agent automatically trying to detect vehicles
* Once the agent is inside the car, move towards another vehicle to observe the collision detection
* “Watch out” signal when further away from another vehicle
* “Crash alert” signal when very close to another vehicle
* Feel free to change the score comparisons to whatever is preferred by you. These comparisons will define how sensitive the model is towards collision detection