**Software Requirements Document**

**Rocket League Bot**

**1. Introduction**

**1.1 Purpose**

The purpose of the program to be built will be to play the game of Rocket League on it’s own without the use of human input.

**1.2 Scope**

*Describe the scope of the software under consideration by*

The Rocket League Bot program is the name of the software to be developed. The program will be an AI bot that is able to control itself and sufficiently play the video game, Rocket League, of its own accord. Initial functionality will be things such as following the ball, being able to boost, and knowing which goal to hit the ball into.

The program itself will serve as a learning experience for the developer as their first dive into video game programming. It will familiarize the developer with the way in which video game API’s work as well as the transferring of data within the game. The bot program itself has no practical purpose other than serving as a practice bot to a human user within the game. There are also bot-only tournaments that the program could be entered into to go up against other user programmed bots.

**2. References**

* https://www.rlbot.org

**3. Requirements**

1. The software shall be programmed in Java.
2. The software shall be built upon the RLBot framework.
3. The software shall be able to communicate with the Official Psyonix API.
4. The software shall communicate with the game at a tick rate of 60.
5. The software shall only work in the “Soccer” mode of Rocket League, as this is the only mode supported by the official AI.
6. The software shall control the car to be able to follow the ball.
7. The software shall control the car to know which goal it needs to protect and which goal to hit the ball towards.
8. The software shall control the car to be able to find boost pads and use the boost.
9. The software shall control the car to be able to jump.
10. The software shall control the car to be able to flip in any direction

**4. Verification**

Any verification/testing will be done in game. Results can be recorded through in game replay.

**5. Appendices**

**5.1 Assumptions and dependencies**

Dependencies are as follows:

* Rocket League
* Psyonix API
* RLBot Framework