Functional Requirements

R1. The system shall support at least two cars: one to lead and one to follow.

R2. The system shall allow any one registered vehicle to function as the lead vehicle.

R3. The system shall allow any registered vehicle to function as a following vehicle.  
R4. The system shall allow the user to transmit directional movement instructions to the vehicle in leader mode.

R5. A following vehicle shall avoid collisions with the leader vehicle.

R6. A following vehicle shall maintain a safe distance from the leading vehicle.

R7. A following vehicle shall stay within a reasonable configurable distance from the leading vehicle.

R8. A following vehicle shall avoid collisions with foreign obstacles.

R9. A following vehicle that loses visual contact with a leader should attempt to reestablish following protocol.

R10. The system shall allow the user to enable logging and saving image data received on the remote client from the following vehicle.

R11. The system shall allow a mirroring mode, wherein the following vehicle mirrors the instructions given to the leading vehicle on a delay.

R12. The server application shall be able to log all movement inputs from a driving session.

R13. The leader car shall be able to read and execute input data from a saved file.

R14. The system shall be able switch leader and follower vehicles during program execution.

R15. The system shall be secure to external threats.

Non-Functional Requirements

R16. The application shall have zero severity level one defects.

R17. The application shall support a remote control range of 20 meters.

R18. The application shall have a mean time between failures of 30 days.

R19. The system shall allow one user to control the leader vehicle at a time.

R20. User input will have a response time of at most 250 milliseconds.