Team AutoMoe
**Design Solutions**

Collin Scott
Design Implementation #1

The problem statement as we have defined it essentially boils down to driving being an unsafe activity due to the human operation component. A solution could be a railway system that covered all roads with tracks for personal train cars to ride on. These personal cars would be attached to the rails beneath them and would run at a predetermined speed to eliminate the possibility of crashing into other cars by switching lanes or rear ending someone. They'd also never run into curbs, haphazardly avoid small obstacles or be manipulated by the individual inside the car. The system would run largely like an airport where select individuals oversee the entire operation and dictate when which cars could, say, merge onto the highway track at which times and so forth to keep the process running smoothly and without error. A computer program could also accomplish this task of keeping each car safe from pickup to dropoff in conjunction with the other personal train cars on the tracks.

Tavares Kidd
Design Implementation #2

Another alternative solution would be a Line Follower Robot with Android and Arduino, an autonomous robot that uses an Android device to analyze the environment using the Camera, and then send commands to the robot.

Lateef Adetona
Design Implementation #3

The server autonomous car is a simple concept It's uses a Raspberry Pi computer, a camera, and an Amazon Web Services server to send data to. The car drives around a lined track to capture images and steering angles, which trains a neural-network autopilot to drive itself around the track.
The system would take pictures and sends them to an Amazon server and gets commands in return. The server collects the pictures and driving information from the user manually driving the car around the track.

Jordan Lafontant
Design Implementation #4

AV (Autonomous vehicles) can eliminate a great deal of human error that occurs during driving and can be realized potentially with the use of gps and machine learning entirely. Each individual vehicle would have a precise location with a miniscule margin of area so the vehicle would be aware of its position in its environment. All movements and actions would be executed with the use of machine learning. With the use of realtime data feed from the gps  the vehicle will be informed of what lanes , roads, turns, etc are available to it. Part of the backbone for the code that would implement vehicular functions would be local

drivers education  rules and regulations for example what vehicles to yield to or speed limits. The vehicle would allow for different  minimum distances between vehicles, objects, and people from data obtained by driving regulations. The vehicles that would use this system would be aware of each other if they are in proximity from their gps capabilities. With the constant use of gps  ,digital waypoints can be efficiently placed in roads, pathways etc for predetermined routes. There are potential areas of vulnerability such as defensive driving capabilities  and avoiding an oncoming crash, in an effort to mitigate risk even further a group of  individuals would be used  so to oversee the entire network and anticipate and discrepancies in traffic such as speeding , erratic driving similar to urban public transportation and airports.