

1. Your "Company Name"

CareCruise

2. Define the final user of your product.

Elderly and handicapped people that need convenient rideshare services

3. Define the problem statement in your own words.

A new startup rideshare company in Arizona wants to expand their frontiers into new markets and technologies in order to beat the competition. It is our job to build the proper car for their needs.

4. Interview the client to learn as much as possible from their needs.

- What accommodations and special needs do we need to account for in the design?
- What are your financial restrictions / budget?
- Are there safety features you'd like to see (GPS tracking, family notifications, emergency buttons)?
- Any amenities you would like included?
- What are the most common destinations (e.g., medical appointments, grocery stores, social activities)?
- What is your budget?
- How often do your clients require transportation? (daily, weekly, occasionally)

5. Define the list of requirements (functional, performance and cost constraints).

There are no cost restraints. The car needs to be able to fit 1 person. The performance only requires the program to work externally. The program needs to be automated and not hard coded. There should be sensors to automate this process.

6. A literature review of engineering information relevant to the problem.

<https://www.mathworks.com/help/matlab/index.html>

<https://docs.python.org/3/>

Notes:

Designing car for handicapped passengers

Standard route or does it change?

The maze will change → the program needs to be generalized and cannot be hard coded

How many passengers does the car need to fit?

Only 1 passenger

Can we map out the maze before (test the map out before)? bad question icl

The code should still not be hard coded

In the maze, can the car hit the walls?

Touch sensors will be in the design so if the sensor hits the wall, it's still fine as long as it backs up. Other sensors to calculate the distance can be used to prevent hitting the walls.

Hardware/Software sessions will be done separately. Teams show up on their accord.

Available sensors:

- Proximity sensors
- Touch sensors
- Gyroscopic sensors

No time limits

Number of parts: no requirements