

## 490A - Assignment 3

### Project Proposal and Preliminary Customer Needs

#### Project Proposal

Provide a multiple paragraph, 1 to 2 page description of what your intended project is. The proposal should be easy to read by an average layperson and should fully describe the project

The following points should be addressed but don't limit yourselves to them:

- What is the problem you are trying to solve?
- Who is your intended end-user?
- Is this intended as a product or purely a research/academic curiosity in an area of computer engineering that you would like to learn more about?
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#### Preliminary Customer Needs

The most important aspect in the early design process of an engineering design project is identifying the customer needs. From those needs we will then extract and define precise and testable specifications. The goal here is that if we design a product that can achieve the same or better in all specifications then the customer will have the best product possible and we will have completed our project with the best possible outcome.

We will start by defining the Customer Needs. In a future assignment we will expand this to create an engineering design specification from those needs.

- Needs - Design projects require a clear reason for solving a problem. Every possible need of the customer should be listed.

Customer Needs fall into 3 categories (Car Example)

- Minimum Needs - Standard Features that are Necessary: Wheels, Seating, Dashboard, etc...
- Assumed Needs - Basic Operation, Safety, Reliability: Ability to Drive
- Unrecognized Needs - Things the customer didn't know he needed: Compression Ratio of Engine, Voltage Levels

**Deliverables:** This should result in multiple pages, where the first page or 2 defines the project proposal and subsequent pages define the customer needs.