**Assignment 2A Report**

EECE 443

Team 2: MCU TNC Design

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*Pier Review of Team 1: Package Delivery Robot*

**Organization**

The paper is well organized to the scholarly formatting required. The paper has a table of contents for easy traversing through the document. Section headings are clearly labeled and detailed enough to provide a title or place holder for what is being read. The paper does have some grammatical errors of which are noted but is well organized.

**Coversheet**

The coversheet is well formatted except for the fact that it is not centered in the middle of the page. The text itself is centered but the position on the page is not centered. However, the coversheet does have all the required content except for the date submitted.

**Scholarly Paper and Formatting**

The paper follows the formatting for a proper scholarly paper. However, the conclusions should not be included in this assignment due to the lack of the project not being completed. It is recommended to remove the placement text and this section in total for this specific assignment until conclusions have been made. Also, the reference section could be better formatted to fit on one column and have a better format for the available links provided.

**Section III – Project Analysis**

* *Project Feasibility*

This portion of the project analysis seems very well organized and explains each aspect pretty thoroughly. The team takes into account many small details and discusses their effect on the project. This section gives a good idea of the project’s feasibility at this point in the design process.

* *Alts and Trade Offs*

In this section, many of the points made by our team previously were taken into account and used to improve this section. It covers a large portion of trade offs when looking to different arms and processes. However, this section does not discuss any software tradeoffs, processor or microcontroller tradeoffs, or sensor/servo trade offs that should be considered in this section of the paper. Little mention of machine learning algorithms that could be compared based on accuracy. If this is not a well thought out idea the first sentence of the paper should not talk about this being a main point in the project.

* *Preliminary Design*

This section seemed to be very short for a design of the entire project. It covers only two pieces of the project: the wheels and the PIR sensor. It does not discuss how the machine learning code is to be developed, how the sensors will be programmed, how robot as a whole will be constructed, and shows little to know simulation or proof that this project as a whole will work. This section needs more detail in all aspects and then it will be a great addition to this paper.

**Section IV - Experiments, Testing, and Data Results**

All and all this section was very appreciated. It shows the actual testing and progress made on this project. It provides the reader with insight on how this project is tested and designed on the physical level. It also shows things that were done well and what were not that were then improved on.

**Appendix C**

This section is a copy paste from the main paper, this section in the appendix should be used to be more detailed than the paper, along with diagrams and explanations.

**Appendix D**

*FMEA (Failure Mode Analysis)*

* Very good structured well and easy to follow
* Plenty of considerations made

*Bill of materials*

* Detailed and well structured
* Tables need to be the same format for professional looking.
* Cost of arms pieces?
* Reference figures in some type of description to describe what they are and how they are to be used.

*Flowchart*

* Lacks any machine learning algorithms to be used or was that scrapped from the initial design?
* Confusing to follow and needs more elaboration and steps taken.

*Level 1 Diagram*

* Well organized and easy to follow
* Detailed input outputs and where they go
* Include internal connections

*Schematics*

* Very informative of connections made to microcontroller
* Wiring is messy and could be better organized
* Bluetooth necessary if so, include in paper

**Appendix**