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Project Proposal Review (Collision-Aware Assembly Planning)

Collision-Aware Assembly Planning, the title of the project is fairly easy to comprehend, as it is very simplistic. The title also provides enough interest in the reader to go ahead and read the paper to expect something related with Assembly Planning and an improvement to the current planning with collision aware methods. In a proposal or a scientific paper introduction is the most vital part because it allows the reader to imbue just the right amount of information to proceed reading the paper. The introduction on this paper is well developed and cohesive, as it follows the standards of being a systematic introduction. The introduction follows the rubric by having a background explanation about the assembly planning, where assembly planning is being used and who are the effected parties. The background needs to be generic as the reader is considered to be naïve. Specifics about the problem and solution are to be applied at the end to position a well-constructed introduction. The team did a great job on interpreting the task they are focused on and conveying that in the introduction. However I feel that a little more information how they arrived to the idea about improving the current graphing mechanisms can help the reader to understand the motivation behind the research project. Also a simple elaboration on the high-level and low-level (technical) tasks would be optimal as the reader has enough information to continue reading the rest of the paper. The best part of this introduction is that it is very cohesive and meets the requirements of

a good introduction, however I feel that improvements can be made with simple elaborations on the specifics mentioned, such as how does the solution benefit the involved parties, etc. In addition if there were sentences, which underline the significance on the academic community if the project is successful, would have been a great enhancement. Overall I feel that this introduction is sufficed to introduce the reader higher-level information about the current ongoing problem and a solution developed by the team.

The research on the project proposal is quite thorough as the paper provides the different approaches taken and how each approach leads to a bigger problem, which is being highlighted and to be solved. The Related Work section builds on the basis of the Assembly Planning Sequence with a clear division of the different approaches of planning, which includes Geometric, Automation, Stochastic Optimization and Partial-Ordered Planning. Further developing on the different approaches, which can help provide back up to their developed plan. Collision Detection is another section, which is provided in the paper to backup the claim and the solution proposal of the team. Overall the Review of Literature section of the paper provides enough information and corpus to lead up to a good plan for the solution. The information provided also allows the reader to understand the current approaches to the problem and allows them to ponder about the different upgrades, which can be made. The section does a good job of dividing the important sectors to have a certain understanding of the current approaches to Assembly Planning and Collision Detection. Through this information the reader can expect a plan to the solution incorporating both the provided segments of textual details. Also the amount of research done for this section is commendable.

The project description consists of the main body of the proposal, the fact that the proposal has been developed in an incremental fashion allows the reader to understand and comprehend the solution the proposal is trying to convey. The paper does a good job in doing so by following the directions of the rubric on the Project Description. The Project Statement is very well structured as they have a clear understanding on what exactly the plan is to solve this particular problem. The statement also contributes to the solution to bring a clear practical, academic and social value. Also the usage of LEGO's in the part of the solution can help the reader understand how and what the team is using to extract a solution. Another good point is the simplistic approach the team is taking to solve the problem, which is quite important in the present day of extended Artificial Intelligence Research. With the given time and limited scope the project scope is well developed with their approach towards the solution. I really liked the section about the way the approach to the solution is divided into different sections. However if the project scope could have contained the rubric specific constraints such as assumptions, exclusions it would have been better. Also since it is just a proposal and the Project Scope can change with different external conditions, a less tied up scope can help the team with their approaches to solve the problem. Allowing them to change the scope and the open-source tools used as progress is made on the project. The Project Deliverables and Objectives are quite straightforward as the paper explains a thorough scope. The Project Risks are well structured and addressed as the research the team has done has been thorough.

Overall I think the topic of Collision-Aware Assembly Planning is quite interesting and the team has done a good job on focusing on the problem and providing a

well thought out plan to the solution. The team has a clear approach to the problem and addressed a comprehensible plan to develop the solution to the problem mentioned. They seem to have a prior understanding of the topic making their idea about the course to attain the solution with the usage of specific open-source and practical applications very understandable. The project proposal can definitely improve on providing bandwidth for them to add/update the project scope as they go through the iteration of the project. As a reader I feel that the team has done a great job in the context of scientific literature. The project proposal is cohesive and well structured to understand the problem and the approach to the solution.