

# Review of: "Design and Fabrication of a Low-Cost Multi-Purpose Underwater Remotely Operated Vehicle"

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**Potential competing interests:** No potential competing interests to declare.

This paper proposed a prototype of a underwater remotely operated vehicle. The system requirement and design of each module were described in the manuscript.

The comments are listed below

1. The article follows a technical report rather than a research paper structure. The article include the required elements of a product design report, including requirement analysis, functional analysis, and design analysis. Therefore, the authors might want to publish this article in a technical platform.
2. The authors reviewed multiple ROV products in the introduction section. However, the limitation of previous products and the improvement planned for the proposed work were not clearly presented.
3. A function flow diagram showing the operation process of the product should be provided in this paper. Though the authors described the functions with several sentences, the concept can be better presented with figures.
4. The authors mentioned about the object identification function of the prototype. However, the algorithm and software design were not included in the manuscript.
5. The formulae of drag force and thrust force were listed in the mechanical design section. However, the actual numerical value of the proposed vehicle was not analyzed using these formulae. The authors might want to include the numerical analysis of the proposed prototype.
6. GPS was used in this work. However, the performance of the GPS decays with the depth of the water. It would be nice if the authors include this analysis.
7. In either technical report or research paper. The test result of the proposed prototype is expected. The authors need to show that the proposed design satisfies the requirements. It is advised that the authors include the test result of the modules and the full system in the edited version.
8. The authors might want to further polish the grammar and sentences in the manuscript. For example, first person should be avoided when writing a research paper/technical report.