

## Integration of Reverse-Engineering Training for Professional Engineers

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Abstract:

As technologies continue to advance, our modern society needs more and more well-trained engineers to develop better

solutions for complex technical problems. In this proposal, we aim to incorporate reverse-engineering as a learning tool into the existing mandatory summer workshop to further strengthen our engineering education. The concept of reverse-engineering is very straight-forward and the corresponding practice are very common in industries: taking products apart to discover how they work, gaining an appreciation to the design principles as well as improving them. By completing this project, the students would have discovered about the construction, materials selection, functionality and integration of each constituent of the technological products. Importantly, the students would also have the opportunities to expose themselves to explore something unknown in the products. All these exercises are unique and valuable to enhance their problem solving skillsets in tackling the complex engineering challenges in their future career.