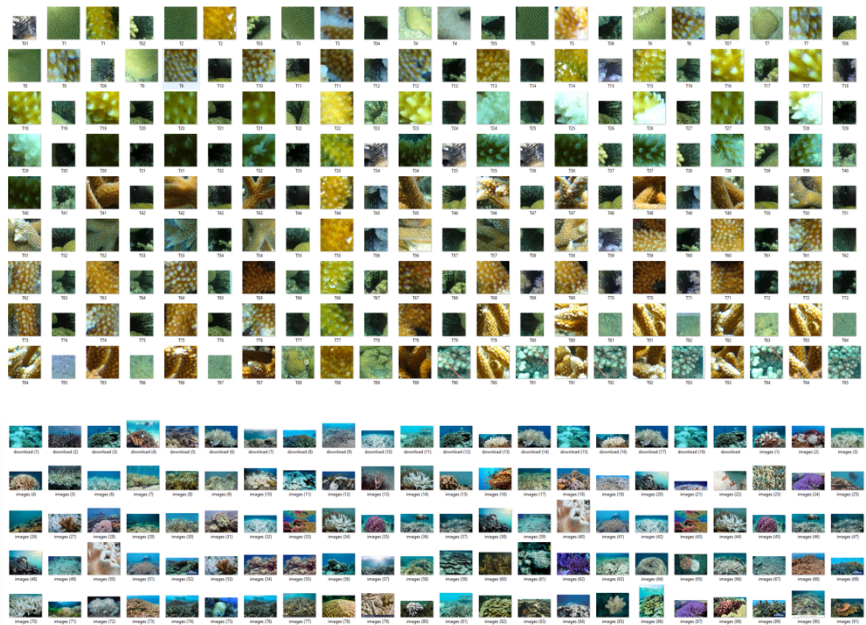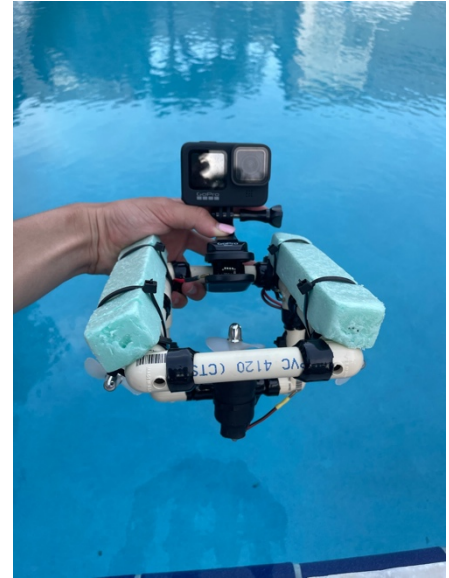# ADHUS Kingfishers (MS-102)

Describe how your team is giving back to the community and why do you think it is important?

The overall goal of our community outreach project is to involve the SeaPerch community in the awareness of the bleaching of different coral species. Our team had the opportunity to reach out to the professors from the documentary "Chasing Coral" and scientists from CoralWatch who guided us in the right direction, and supplied us with images of corals from Australia. We then used machine learning to distinguish the difference between dead and alive coral. We used a simple machine learning website called Teachable Machine to host machine learning. Using this website, anyone could participate in coral research or use the site to distinguish coral regardless of prior machine learning experience. After completing the software aspect of our project we started to move onto creating an ROV specifically for our community outreach project. Our main goal with this craft was to make it with all of the materials that the original SeaPerch kit had. We did not make very many modifications to the stock craft other than rearranging PVC pipes. We did this so that in the future we could have more students and teams join our project of detecting corals and from there we could have data from multiple teams in different areas. With the information that they gather we can help scientists and

researchers, as well as make our community more aware of the impact they are having on their reefs. Teams would be able to contribute to this project and can help others know which areas in the United States or other countries need focus in conservation efforts. We hope that we can help students and SeaPerch teams become more involved in this project with the simplicity of the craft design and the machine learning. A lot more data and research can come from this project that could assist us better understand what we can do as a community of engineers, researchers, scientists, and people.

Supporting References:
https://teachablemachine.withgoogle.com/models/fJslQe3sP/