Our research project was launched at Cal Poly in 2019 with the goal of assisting researchers at the CSULB Shark Lab in detecting sharks from aerial images. Under the guidance of Dr. Franz J. Kurfess, students trained an object detection algorithm using shark images and were able to achieve high rate of detection. Following this success, the team has constructed multiple drones and expanded their research to include applications in the fields of agriculture and ecology. This summer the goal is to use a iPhone 14 Pro in lieu of a traditional camera system for real-time object recognition. Research was continued looking toward low-cost methods of object recognition.

### Marine Science
Utilizing drones and on-board object detection technology to identify shark species and track their movements can be used to study shark populations, migration patterns, and behaviors, ultimately helping biologists better understand and protect these animals.

### Agriculture
Drones equipped with object detection technology can provide farmers with a powerful tool for monitoring and managing their livestock, improving the efficiency and sustainability of their operations.

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