



# Use of Drones to Study Impacts on Turtles

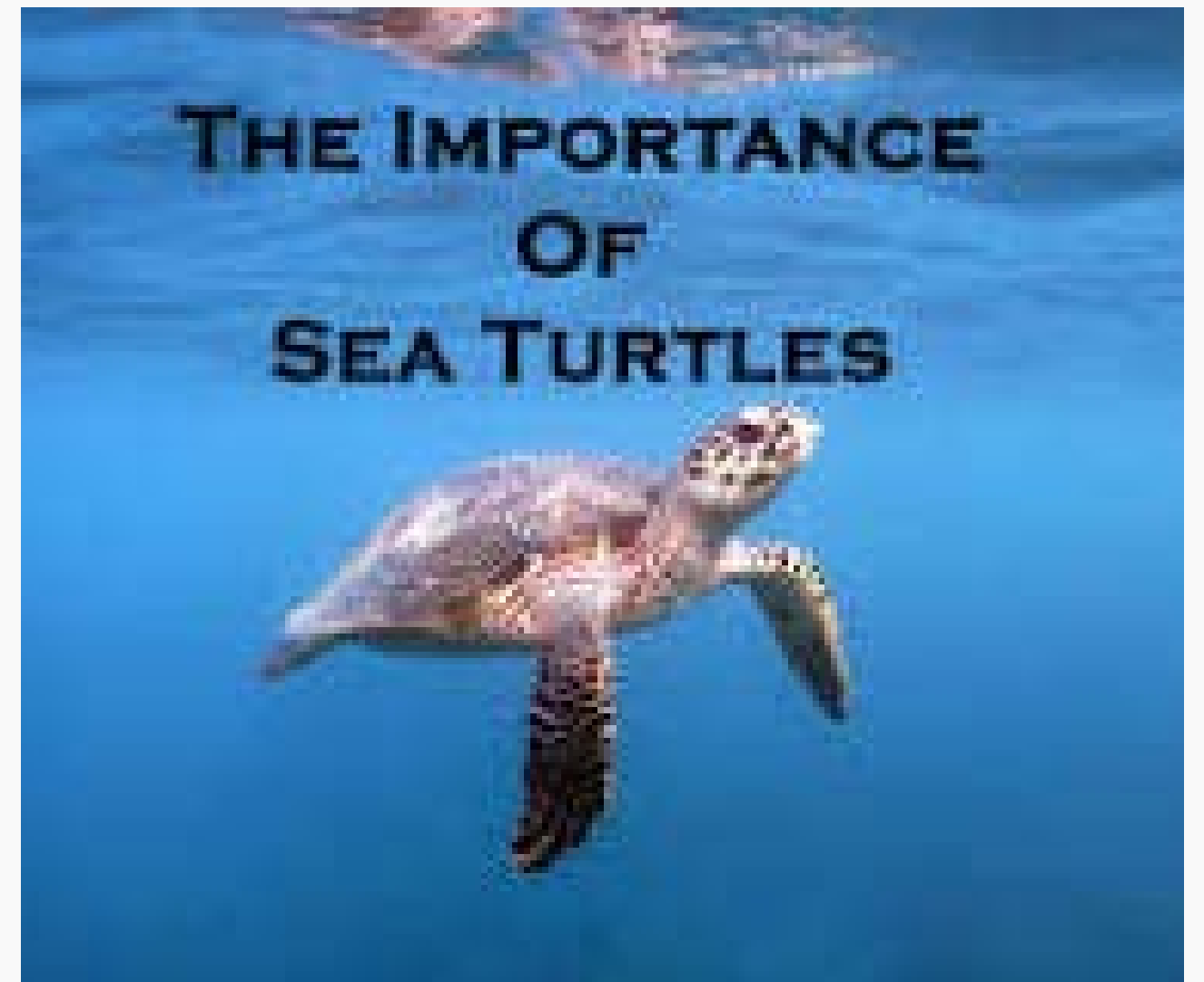
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- Sea turtles have played vital roles in maintaining the health of the world's oceans for more than 100 million years.
- These roles range from maintaining productive coral reef ecosystems to transporting essential nutrients from the oceans to beaches and coastal dunes.
- Major changes have occurred in the oceans because sea turtles have been virtually eliminated from many areas of the globe.
- Commercial fishing, loss of nesting habitat and climate change are among the human-caused threats pushing sea turtles towards extinction.
- Turtle conservation is therefore critical, but it is difficult.

Source: [Ocean Conservancy](#)

# Why Turtles are Important?



Turtles are threatened around the world.

An accurate count of turtles is necessary in conservation prioritization and management, yet visual counts of turtles in water are notoriously error-prone.

The present study proposes an alternative: the use of aerial drone imagery for non-intrusive, rapid, and repeat turtle counting.



## Use of Drone - to study Turtles



The drone flies over a body of water, collects imagery, which is then analyzed using machine learning ("artificial intelligence") approaches to extract the turtles from the image, providing a count of those turtles in the image.

In this project, previously collected image of live turtles will be analyzed, and the summer research team will also be conducting survey of 3-D printed turtle decoys in Lake Como, Belmar, NJ

# Summer Scholar Michael's Research Story



