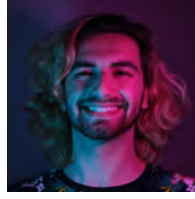


# **Team 4 - Ariel - Autonomous Coral Reef Monitor**



**Anirudh  
Waturkar**



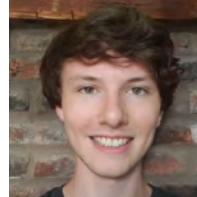
**Constantinos  
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**Mrinal  
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**Sean  
Nemptzow**

**Client: Student Defined Project**

Due to the effects of global warming and pollution, coral reefs are rapidly dying, which is destroying the habitats of many aquatic animals. Current methods to monitor the health of coral reefs are laborious and unscalable due to their reliance on divers. To assist marine biologists and conservationists in their efforts to monitor and restore the coral reefs, we propose an autonomous aquatic vehicle, Ariel, which can routinely measure the water quality around and image a specified area of the reef. Ariel will be able to provide color-corrected images of the coral reef as well as metrics such as pH, temperature, and turbidity each minute. Ariel is intended to increase the efficiency of conservation teams by reducing surveying time and cost.