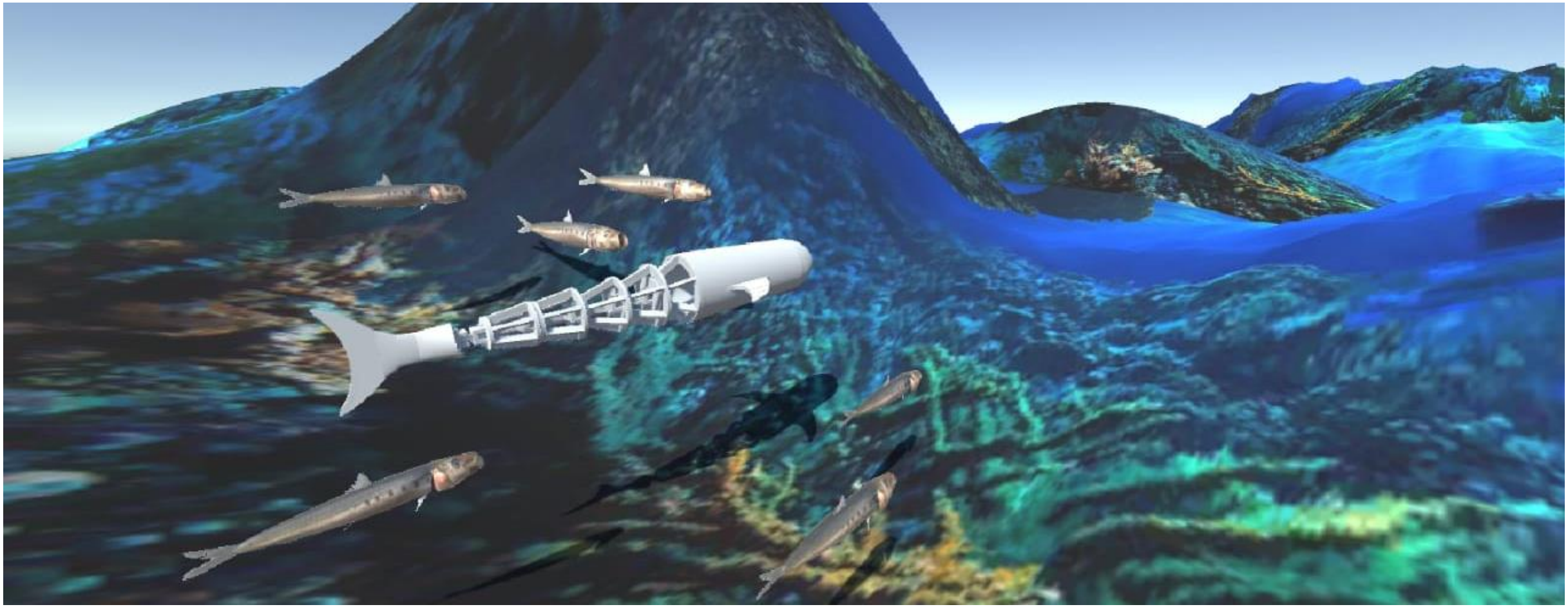
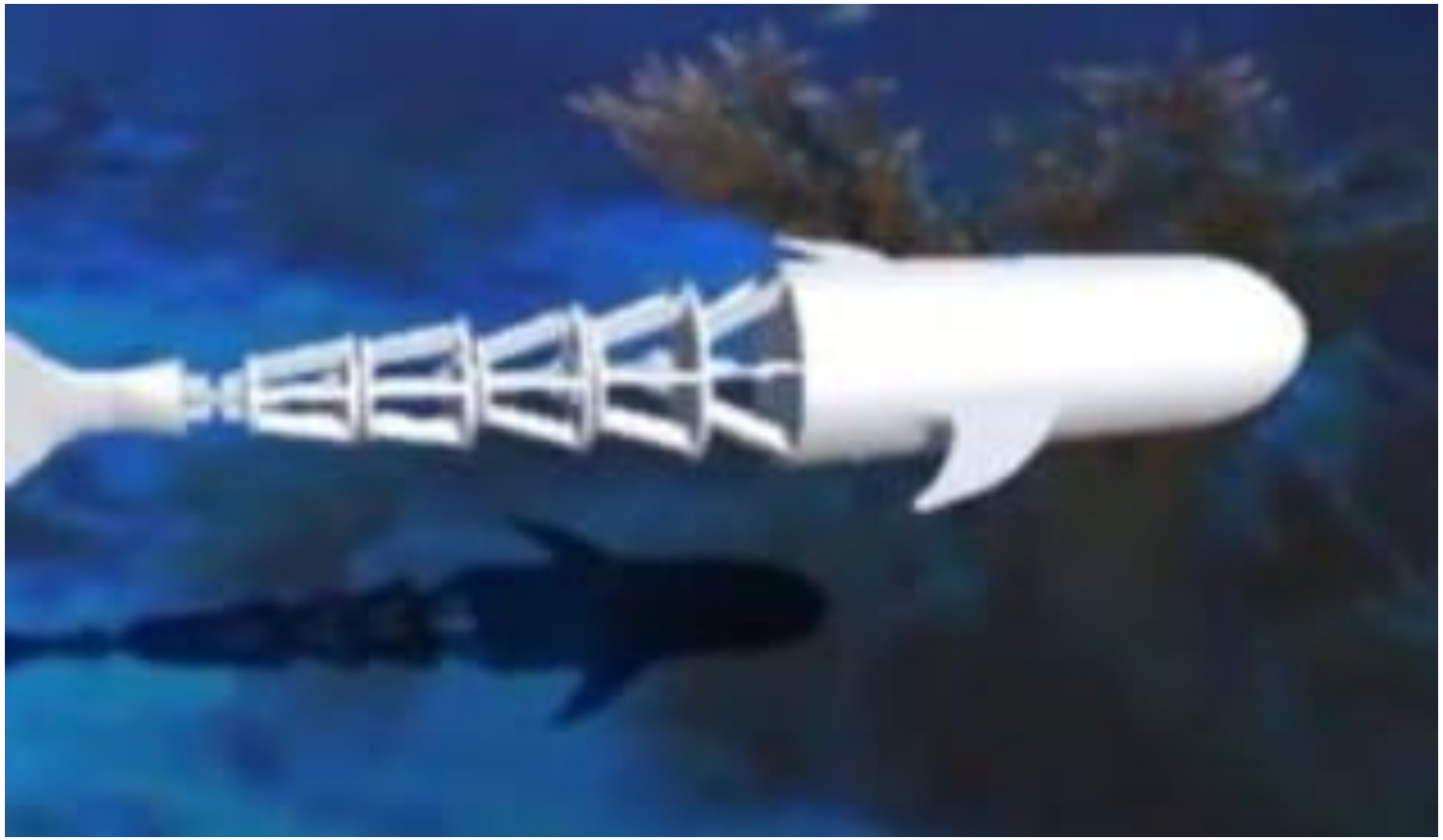


ROBOTIC FISH



Robotic Fish, as the name implies, mimics the motion of fish and is capable of agile swimming maneuvers in aquatic terrain.

A robotic fish's main goal is to assist in bio-related research, underwater exploration, and underwater life study without disrupting the natural ecology.

A set of five "links" is employed, which are interconnected at a place that allows for left-right motion, forming a vertebral system. The servo is attached to a couple of strings that pass through each link, and tugging these strings forces each link to bend over at an angle. These angles are combined up to create the necessary curvature, and the motion of a fishtail is created by repeated bends in opposite directions.

The servo, which is controlled by a Raspberry Pi, rotates in opposite directions in a periodic pattern, pulling these strings and therefore assisting in the management of the fish's forward motion.

The Raspi allows us to control the robot through the internet, and the onboard camera feeds live video to the web server, allowing for improved user control.

A syringe system is also utilized to control the fish's buoyancy, and this syringe is controlled by a lead screw mechanism.