

ABSTRACT

The jellyfish swarm is the explosion of the jellyfish population and disrupts the marine ecosystem. Because the jellyfish attack exploded and the jellyfish's mass was light, they were carried by the ocean currents to the coast. Finally disrupting the cooling of the Steam Power Plant (PLTU) which resulted in overheat in Paiton.

To overcome this we need a system that detects a jellyfish. This study uses an automatic detection method in real-time video with the addition of an alarm system to notify a jellyfish.

In this study, a jellyfish detection tool was designed using a single board computer (single board system) and a webcam camera by implementing the MobileNetV2 and YOLOv3 extraction methods used to identify jellyfish. The image obtained will be processed through a darknet system preprocessing process assisted by darkmark to assist in purchasing images and darkhelp to display percentage detection. Next, the image will be extracted using the darknet for image processing and then set such as saturation, hue and exposure.

The expected results in this study are tools designed to identify jellyfish. The results obtained from this tool are that it can detect a person with an accuracy rate of 96% and a recall of 95% which is obtained after testing 72 pieces of data.

Keywords: Darknet, Darkmark , Darkhelp, Jellyfish, MobileNetV2 , YOLOv3