

## **ABSTRACT**

The economy of Probolinggo Regency and city residents, especially in coastal areas, is highly dependent on the fishing profession. The limited environmental monitoring and prediction technology used is a challenge for traditional fishermen, especially when they want to go to sea. It will be very dangerous if when fishermen are already in the middle of the sea but the weather turns bad very quickly which can endanger the lives of fishermen. I propose an environmental monitoring and prediction system utilizing the Internet of Things (IoT) and Artificial Intelligence (AI), this is done by using IoT sensor networks for real-time environmental monitoring, a centralized data processing and analytics platform, as well as a user-friendly interface for visualization and decision support and AI algorithms used for data processing to enable proper environmental monitoring and prediction for traditional fishermen. The results show the early detection of environmental hazards that can make fishermen know in advance the weather before going fishing to the middle of the sea, and also our awareness of the importance of protecting the surrounding environment.

**Key words:** Internet of Things, Artificial Intelligence, future environmental monitoring, traditional fishermen