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## Deep learning-based prediction of fish catch for the offshore waters in south korea

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Recently in Korea, the fish catch of offshore waters recorded less than 1 million tons in 44 years due to climate change and drastic changes in the fishing environment. Therefore, it is essential to produce and provide accurate fishing forecast information, such as the location of fishing fields and the amount of fish production, that varies in time and space according to fishing conditions to enhance the competitiveness of the fishing industry. Since the factors affecting the fish catch have various and nonlinear relationships, so this study predicted the catch based on deep learning. The study was selected as the three major fish species of the Korean coast -- anchovy, mackerel and squid. The research area was selected as four fishing area. (One fishing area is 14 km \* 14 km). In order to produce accurate forecasted fishing information, it is necessary to identify major marine weather and biological factors affecting the fish catch by fish species and artificial intelligence modeling using marine and weather satellite images. The satellite data used in the study are from the Korea Meteorological Administration (KMA). So far, research on the relationship between two or more factors and fish catches has been insufficient in the previous research, so this study may contribute to the prediction of fishing trends.