



Kolloquium zur Masterarbeit

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## *“Development And Evaluation Of A Database Backend For Machine Learning Data In A Maritime Information System“*

After WWII, thousands of tons of chemical weapons were dumped into the Baltic Sea which are in the deep areas of the seabed. These ammunitions pose a huge threat of contamination to the marine environment, as the shells of these ammunitions rust over time releasing harmful chemical explosives. Even now, the chance of people encountering Chemical Warfare Agents (CWA) while working in the marine environment of the western and southern Baltic Sea cannot be ignored e.g., offshore constructors and fishermen are exposed to the dangers of these munition objects. In the understanding of the increasing utilization of the seafloor for economic purposes e.g., sea cables, offshore wind farms, infrastructure pipelines, etc., the risk of encountering sea-dumped munitions is increasing. There is a need for a system to investigate the types of munitions and their effects on various protection goods such as "Divers", "Fisheries", "Fauna/Flora", "Tourism", and "Shipping" using Machine Learning Models to assist the ammunition experts to analyze the Artificial Intelligence model's predictions as these munition objects can explode or corrode with time. To solve this issue, Daimon DSS has been built for this project for the risk assessment of the newly found munition objects, where the risk is provided as a dimensionless number representing the risk range from 0 to 100. 0 represents no risk and 100 represents the highest risk. These are quantitative values of the qualitative sentiments, i.e., the numerical risk assessment which was assigned by the experts based on the information provided to them. These assessments also consist of corresponding standard operation procedures and an indication of suited measures, so that preventive steps can be taken accordingly.

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