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Dataset: Ocean Clean Up

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Abstract

The ocean, which produces more than half of the world's oxygen, is being significantly polluted. According to Condor Ferries, "In the past 10 years, we've made more plastic than the last century," and more than 100 million marine animals are dying from plastic waste every year. Fortunately, sustainability awareness is steadily increasing among society and organizations are taking actions to improve the situation. Ocean Conservancy, one of the organizations, plans to make significant strides in cleaning up waste polluting our oceans and other bodies of water. One such advancement is through the project, Clean Swell. Clean Swell is a mobile app that allows volunteers to record the types of trash and contribute to the global ocean trash database that researchers and policy-makers can utilize for insights on potential solutions.

We decided to investigate the global ocean trash database to solve these two problem statements: How many resources do we need to clean up the oceans? Where do we optimize resource allocation? The dataset provided to us is a subset of U.S. specific variables that provide information on the location, clean-up type, pounds of trash, and different types of trash for each volunteer's entry. After performing multiple stages of data wrangling and data analysis we synthesized the results to various different visualizations of garbage density per area, garbage collection activity, and the efficiency of volunteers in diverse cleanup locations to effectively understand and tackle our problem statements.

With our findings, we are able to generate solutions for ocean pollution and improve sustainability. One such solution would be through flyers containing our analysis that can alert local residents to be aware of certain garbage items based on the most found garbage item of the location.

Our analysis is versatile and can be molded to be used in many different solutions all towards the flourishing and revitalization of our oceans.