**Vessel Proximity Detection**

**Overview**

This script identifies proximity events between vessels using their coordinates, timestamps, and MMSI numbers. It calculates distances and detects when vessels come within a specified threshold.

**Prerequisites**

**Required Python Packages:**

* pandas
* geopandas

**Installation:**

pip install pandas geopandas

**How It Works**

1. **Function: find\_vessel\_proximity\_geopandas**
   * Detects proximity events and returns a DataFrame with mmsi, vessel\_proximity, and timestamp.
2. **Function: main**
   * Loads a CSV, detects events, and saves the results to a new CSV.

**Usage**

1. Set the file\_path in the script to your CSV file.
2. Run the script to generate the output CSV.