



HACKATHON CHALLENGE: TOURISM DIVING APPLICATION

TEAM COMPASS



CHALLENGE

Proposers: Graham Worley and David Mills

Objective: To derive a map of interesting dive sites with an index of suitability

Site chosen: Maltese waters

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STUDY SITE

- Maltese waters
- 16 sites selected
- Rich marine diversity
- Top tourist spot
- Interesting dive locations





METHODS: DATA SOURCES

- COPERNICUS- MARINE
 - Significant Wave Heights and Direction (m, Degree)
 - Dataset: MEDSEA_ANALYSIS_FORECAST_WAV_006_017
 - Grid size: 0.042 degree x 0.042 degree
 - Frequency: hourly
 - Currents Speed and Direction (m/c, Degree)
 - Dataset: MEDSEA_ANALYSIS_FORECAST_PHY_006_013
 - Surface measurements
 - Temperature (°C)
 - Dataset: MEDSEA_ANALYSIS_FORECAST_PHY_006_013
 - Frequency: Daily
 - Transparency (by Turbidity), m
 - Dataset: OCEANCOLOUR_MED_OPTICS_L3_NRT_OBSERVATIONS_009_038
 - Grid size: 1 km x 1 km (Surface only)
 - Frequency: daily-mean





TECH STACK

- Apache Web Server
- HTML5
- JavaScript
- Leaflet (OSM)
- GeoJSON
- Python



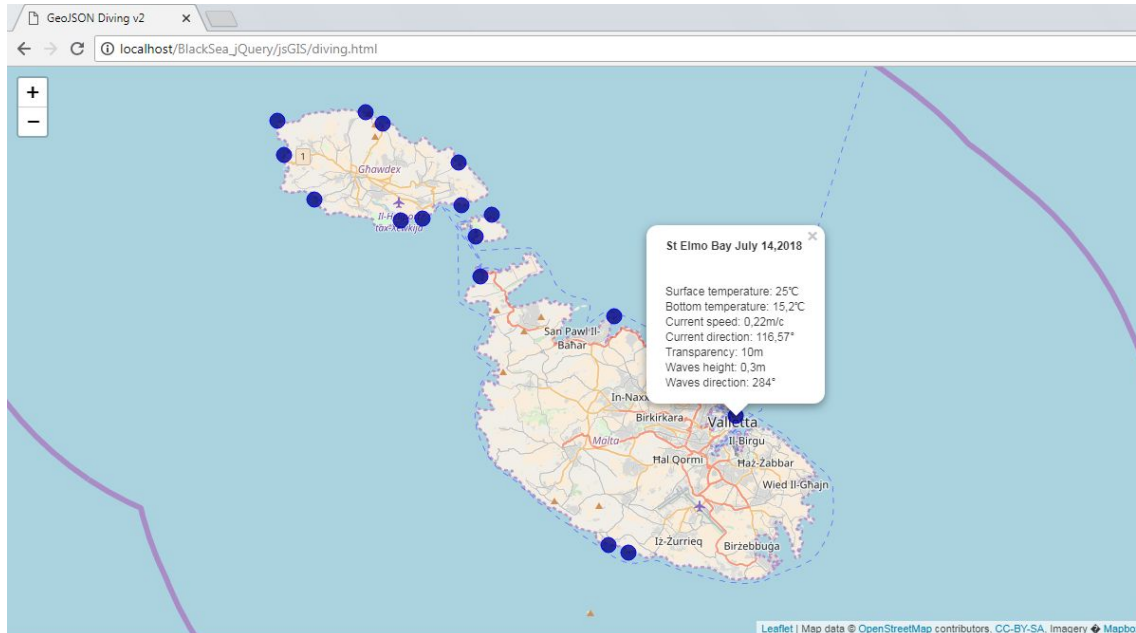
JavaScript

HTML



python™

TOURISM DIVING APPLICATION DEMO





REMAINING WORK

- Come up with a suitability index based on the given parameters
- Use of real time data
- Present other essential parameters: seabed communities, contaminants, human activities around those sites
- Capability to suggest new sites
- Include cave sites, shipwrecks and other submerged artifacts



THANK YOU FOR YOUR ATTENTION!!!

**A LOT OF THANKS TO THE SUMMER SCHOOL
ORGANISERS AND MENTORS!**