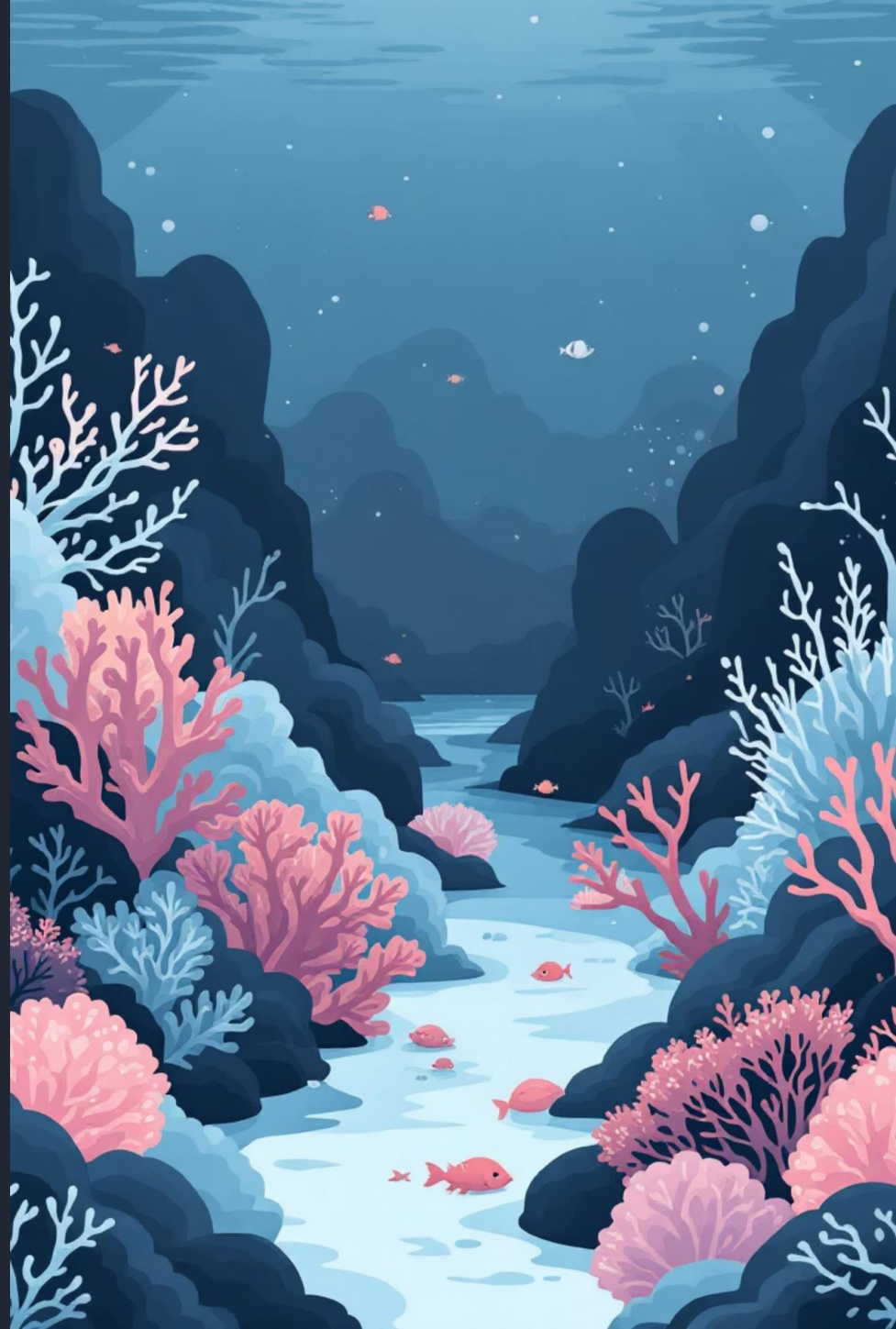

AQUATOPIA

Ocean Health Data: From Raw Data to Insights

Transforming ocean health data into actionable insights using Machine Learning and interactive visualizations for environmental stakeholders and policy makers.

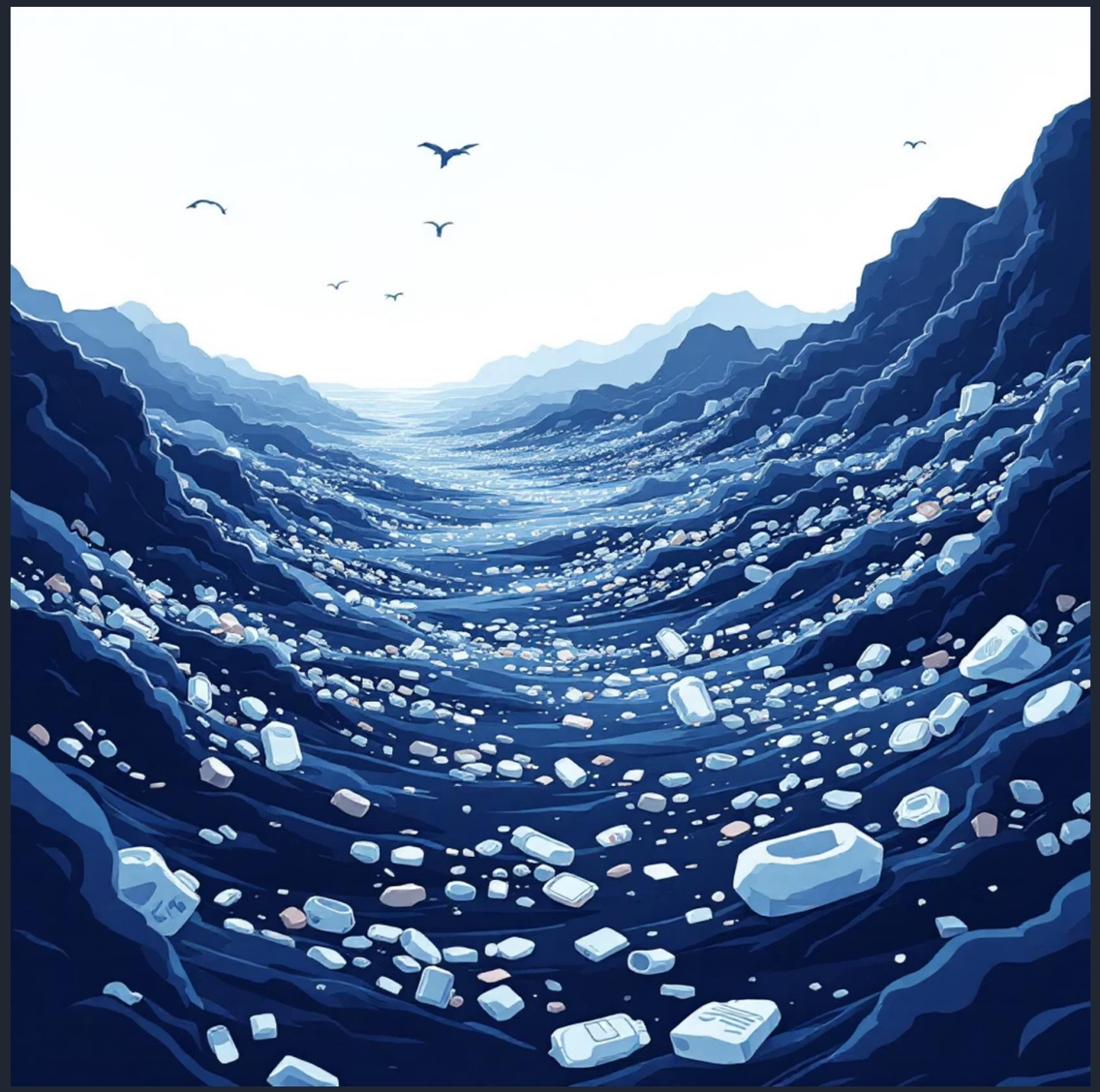


Our Oceans Under Threat

The Challenge

Our oceans are fundamental to Earth's ecosystem, regulating climate, producing oxygen, and supporting incredible biodiversity. Yet they face unprecedented pressure from pollution, overfishing, and climate change.

Traditional monitoring methods provide limited insights. We need data-driven approaches to understand ocean health patterns, predict future trends, and inform evidence-based policy decisions.



Project Mission

Machine Learning

Develop predictive models in Python using ocean health indicators to forecast trends and identify key contributing factors.

Visualization

Based on the model, create visualizations that clearly show the trends so they can be easily interpreted.

Presentation

Create a presentation in which you clearly explain everything or give a demo if you have additional features.

Expected Deliverables & Impact

Technical Outputs

- Github repository
- Presentation
- ML model & visualizations
- Additional features

Key Insights

- Critical ocean health indicators
- Regional vulnerability patterns
- Predictive trend analysis
- Policy recommendation framework

Real-World Applications

- Evidence-based policy making
- Research priority identification
- Resource allocation guidance
- Conservation strategy development

Schedule

9:30 - 12:00	Hacking time (ML model + visualizations + AI survey)
12:00 - 13:00	Lunch
13:00 - 16:00	Hacking time (ML model + visualizations + presentation)
16:00 - 17:00	Presentation time (5m/team) + judging
17:00 - 18:30	Dinner & drinks
18:30 - 19:00	Award ceremony

Questions?