Inclusive Data 2023

A digitalpage.org Hackathon

Sponsored By

Capgemini

FINANCIAL SERVICES - INSIGHTS & DATA

ESG

PROBLEM STATEMENTS

PROBLEM STATEMENT #1:

Develop a benchmarking tool which displays board diversity, NZ commitments, social impact and emissions

As both DEI and climate action continues to rise in importance, demand for transparency and performance on both issues does too. Create a benchmarking tool for public companies which uses data on the board composition of public companies as well as social impact, net zero commitments, and emissions.

Bodies such as the CDP or public emissions factors datasets can provide emissions data, but data on NZ commitments, social, and board diversity may require web-scraping and text analysis from company reports and other sources. If the team is looking to create emissions data estimates using emissions factors, the PCAF standard provides guidance on how to calculate public equity emissions.

Social impact data can be extracted from company reports (e.g. CSR reports using Python). Data attributes such as spend on events, donations, hours of community service, tie ups with Non-Profit Organizations, etc.

Emission factor data sources: ecoinvent, Defra, Intergovernmental Panel on Climate Change (IPCC), GEMIS (Global Emissions Model for integrated Systems), and Food and Agriculture Organization of the United Nations (FAO); EEIO databases (can be used to obtain such emission factors): EXIOBASE, Global Trade Analysis Project (GTAP), or World Input-Output Database (WIOD)

PROBLEM STATEMENT #2:

Predicting Agricultural or Farm-based Emissions

Currently, there are many Small and large Agricultural Farms in US/across the globe where crop-generated/farming-generated emissions is a pressing issue but there are no data/standard methodologies /tools /resources available to calculate overall emissions. A large part of agriculture land represents privately-owned farms.

One way is to map the farm location (ex. using latitude and longitude) to the public farms locations where the emission data/ information is available and then calculate proxy based emissions, driven by multiple parameters (land usage, land area, existing emissions for the location, farming type, technology used etc.). Hence the GHG Emissions forecast, specific to the given scenario, is largely based on farm location (determined by address mapping).

The ask, therefore, is to develop an effective solution to match farm addresses (geo mapping) and subsequently developing a predictive emissions calculator and model for the mapped agricultural farmlands.

PROBLEM STATEMENT #3:
Biodiversity Index

Define a framework and methodology to calculate Biodiversity (BD), Biodiversity loss (BDL) and BD risks (pollution, deforestation, GHG emissions etc.) aligning the framework with TNFD The Global Biodiversity Framework (GBF) agreed at COP 15, other globally emerging frameworks.

- Examine public sources of biodiversity related data for a sample prototype
- Develop a Biodiversity Index to geo-map and benchmark regions/ US farmlands as BD leaders and BD laggards
- Develop a predictive tool to map geolocation (latitude, longitude) with attributes like BD, emissions and climate risks and forecast BD, climate risks

Link your BD framework to BD Bonds and Capital Market Financing