

Analyzing Company's Environmental and Social Activities

Perpetual Investors GmbH – Capstone Project Summary

(Bruce) Chang-Hung Hou, Leah Fowlkes, Yuchen Feng, Yuzhe Zheng

Our Mission

The concept of eco-friendly, an item or action that is beneficial for the Earth, has gone viral in the investment area. In recent years, when it comes to evaluating a company, investors no longer merely focus on their profit, revenue, and costs. They place a higher priority on the firm's environmental impact. They regard Environmental Intensity (E/S), which covers all sorts of pollutions including but not limited to air, water, land, as one of the typical criteria to estimate overall environmental activities. They are also interested in future E/S values and factors that affect E/S. This is where we come in! We are here to leverage our data analytic skills to identify environmental activities performed by various firms, and more importantly, help investment firms make a more precise judgment of investing companies from a sustainability perspective.

Our Strategy

We do not provide a cookie-cutter approach. Instead, we bring a customized analysis of Environmental Intensity across a variety of businesses. Our analysis is divided into two main portions. In the first section, we conduct descriptive analysis to discover indicators that affect E/S. Regression models and data visualizations are applied to detect significant variables. In the second section, we dive into predictive analysis to forecast future value of E/S. We introduce stationarity test and BERT model, a machine learning method that captures sentence structures, into our pipeline. Both structure and unstructured data were fed into our models.

Our Value

Through the assistance of our teamwork, clients are now able to obtain more detailed stories about the extent to which company or industry plays a role in positive or negative environmental impacts. They can keep track of certain signs that directly influence the environmental performance within and across corporates. Future Environmental Intensity has become predictable as well, which is considered essential information for making investment and divestment decisions.

Our Transferrable Skills

This Environmental and Social Activities analytics project, which relies on combined knowledge of data analytics, environment, and finance, gives us the ability to:

- Collect, prepare, and tabulate intricate data
- Construct practical models for descriptive and predictive analysis
- Report analytic results and business suggestions to financial stakeholders