

ESG AI

Brief Introduction slide

S&P500 with ESG

Survey

S&P50's hottest trend is ESG!

1. ESG ETF: iShares®ESG Screened S&P500 ETF

<https://www.spglobal.com/spdji/kr/indices/esg/sp-500-sustainability-screened-index/#overview>

<https://www.spglobal.com/spdji/en/education/article/the-sp-b3-brazil-esg-index-a-new-benchmark-for-sustainability-and-investment>

2. 90% of S&P 500 Publish ESG/Sustainability Reports (pdf slide)

https://unctad.org/system/files/non-official-document/ciiisar37_2_RHirth_en.pdf

3. article - 3BL MEDIA

<https://www.3blmedia.com/news/90-sp-500-index-companies-publish-sustainability-reports-2019-ga-announces-its-latest-annual>

4. Sustainability report 2021. AAPL example

https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2021.pdf

5. Amazon & Climate Pledge: net-zero carbon emission task for 2040

<https://sustainability.aboutamazon.com/about/report-builder>

Recent paper for ESG investment

Harvard Law School Forum on Corporate Governance

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ESG Matters

Posted by Subodh Mishra, Institutional Shareholder Services, Inc., on Tuesday, January 14, 2020
on ESG Matters Comments Off

Tags: Capital allocation, Climate change, ESG, Firm performance, Institutional Investors, Profitability, Risk, Risk management, Sustainability
More from: Anthony Campagna, G. Kevin Spellman, Subodh Mishra, Institutional Shareholder Services Inc.

Editor's Note: Subodh Mishra is Managing Director at Institutional Shareholder Services, Inc. G. Kevin Spellman is a Senior Advisor, and Anthony Campagna is Global Director of Fundamental Research at ISS EVA. This post is based on their ISS memorandum. Related research from the Program on Corporate Governance includes [Socially Responsible Firms](#) by Alan Ferrell, Hao Liang, and Luc Renneboog (discussed on the Forum [here](#)); [Social Responsibility Resolutions](#) by Scott Hirst (discussed on the Forum [here](#)); and [Reconciling Fiduciary Duty and Social Conscience: The Law and Economics of ESG Investing](#) by a Trustee, by Max M. Schanzbach and Robert H. Sitkoff (discussed on the Forum [here](#)).

Summary

- High/favorable ISS ESG Corporate Rating performance is Generally Positively Related to Valuation and Profitability and Negatively Correlated with Volatility
- High/favorable ISS ESG Corporate Rating firms are Good Allocators of Capital
- High/favorable ISS ESG Corporate Rating Performance / High-EVA Margin Stocks tend to Outperform
- High/favorable ISS ESG Corporate Rating Firms Tend to be Less Cyclical and are More Likely to be in the Technology, Health Care, and Consumer Non-Durables Sectors

There appears to be a link between ESG—Environment, Social, and Governance—and financial performance (figure 1). While one can argue that the relationship between ESG and financial performance is perhaps due to the fact that more profitable firms have the resources to invest in areas that positively influence ESG, it could also be that profitability rises as a result of a company better managing its material ESG risks, or it could be a little bit of both. If it is a little bit of both, then this means that good-ESG initiatives drive up financial performance, which then provides the monetary resources to invest to be an even better-ESG firm, which then drives up performance again, and so on.

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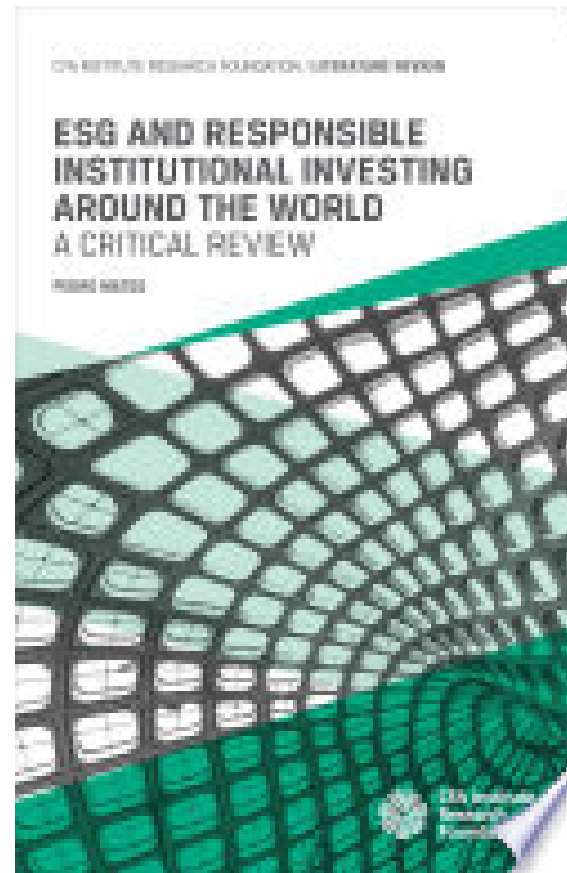
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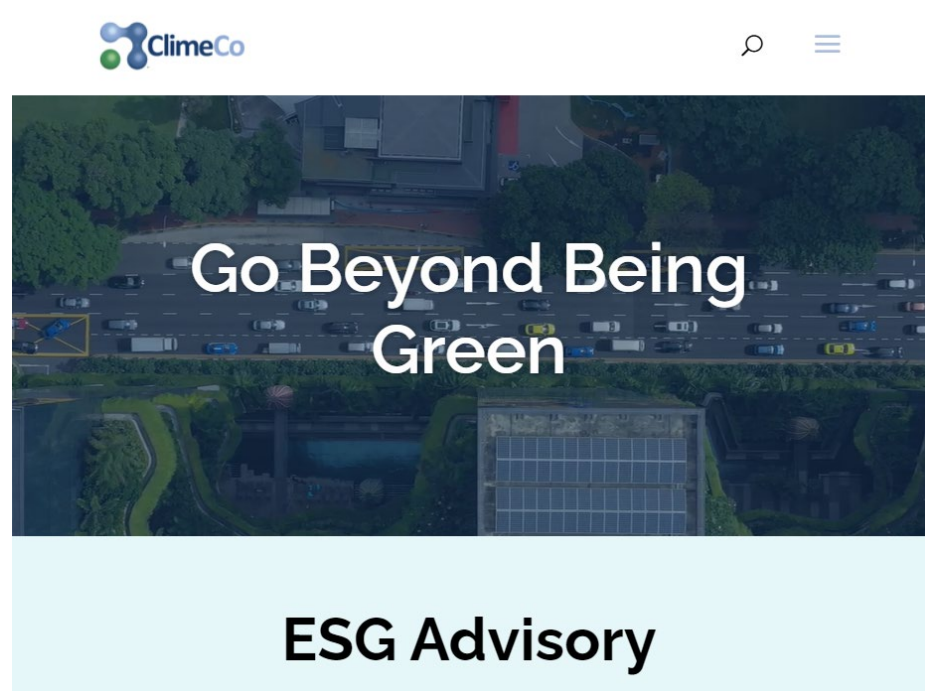


- Taylor & Francis - financial analysts journal
 - Why and how investors use ESG information: Evidence from a global survey
- Idunn journal
 - ESG and socially responsible investment: A critical review

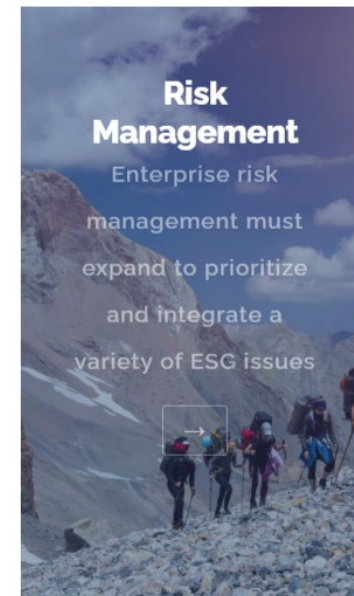
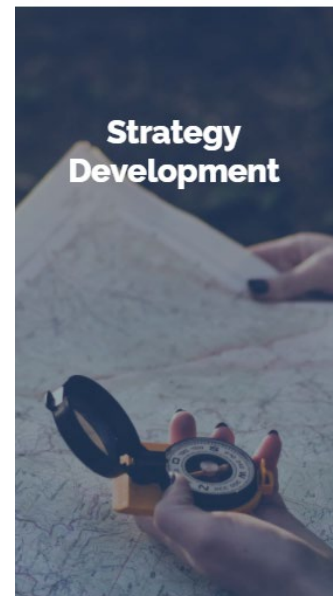
ESG advisory service enterprise

► ClimeCo

- https://climeco.com/esg-advisory/?gclid=Cj0KCQjw8_qRBhCXARIsAE2AtRYWGljc-bda6r_VHJ4vVIBzvcYl8UExdfJpJ28HFA1-wiXxQY72GblaAsLkEALw_wcB



Sustainability Solutions



Greenwashing & its examples

- ▶ <https://thesustainableagency.com/blog/greenwashing-examples/>



2. Keurig

- **Year:** 2022
- **Who called it out:** The Competition Bureau
- **Type of greenwashing:** misleading recycling claims
- **Where:** Canada



ESG with AI

- Why AI is needed for this service?
- Technical stack explanation

ESG reporting

- <https://sphaera.com/glossary/what-is-esg-reporting-and-why-is-it-important/>

ESG Reporting

- 90% of S&P 500 index companies published annual sustainability reports
- There is not one standard reporting format, but there are general reporting guidelines (e.g. Nasdaq)
- Reports range from 30 pages to 200+ pages
- One report can take 6-7 hours of pure reading time
- Analysts read multiple reports to understand company trends and themes, spending weeks for their ESG thesis in addition to alternative data

Worldwide News

- Investors, individuals, and institutions alike leverage financial news to make investment decisions
- News impacts markets and contains important information to keep investors up to date
- Financial news can come from many sources: publications from the actual company to third party reporting
- News is worldwide as are companies and gives insight into many different categories: from technical details to sustainability to product release information



Problem

Determining an ESG score for a company is difficult. Currently, research analysts must leverage many different sources of data and spend time scouring news articles to put together an informed ESG scoring thesis. Time is of the essence and with so many comparable companies across many different sectors, the current manual approach, taking weeks to months, is highly inefficient. For individual investors this process is an even lengthier process. ESG scoring should be an automated approach and accessible to everyone.

Solution

ESG^{AI} is a research service and platform that ingests billions of company and industry wide news articles, performs sentiment analysis to understand tone across the categories, and uses deep learning in a graphical format to understand relations between companies and their news.

Using a data driven approach, we are able to automate and continuously monitor and score ESG performance for thousands of companies in real-time, saving investors thousands of hours of research time.

GDELT?

750,000,000,000+ data points



Watching The Entire World

GDELT monitors the world's news media from nearly every corner of every country in print, broadcast, and web formats, in over 100 languages, every moment of every day.

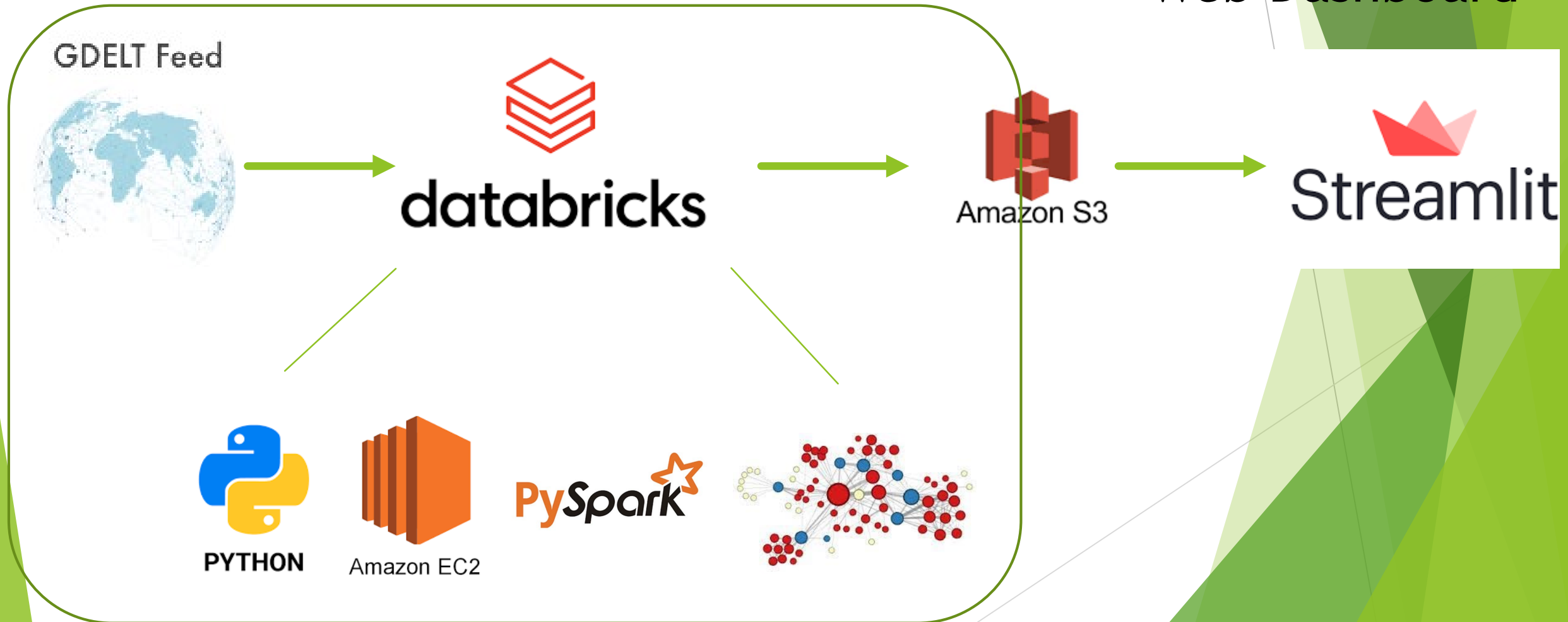
Global Reach

GDELT monitors print, broadcast, and web news media in over 100 languages from across every country in the world to keep continually updated on breaking developments **anywhere on the planet**. Its historical archives stretch back to January 1, 1979 and update every 15 minutes. Through its ability to leverage the world's **collective news media**, GDELT moves beyond the focus of the Western media towards a far more global perspective on what's happening and how the world is **feeling about it**.

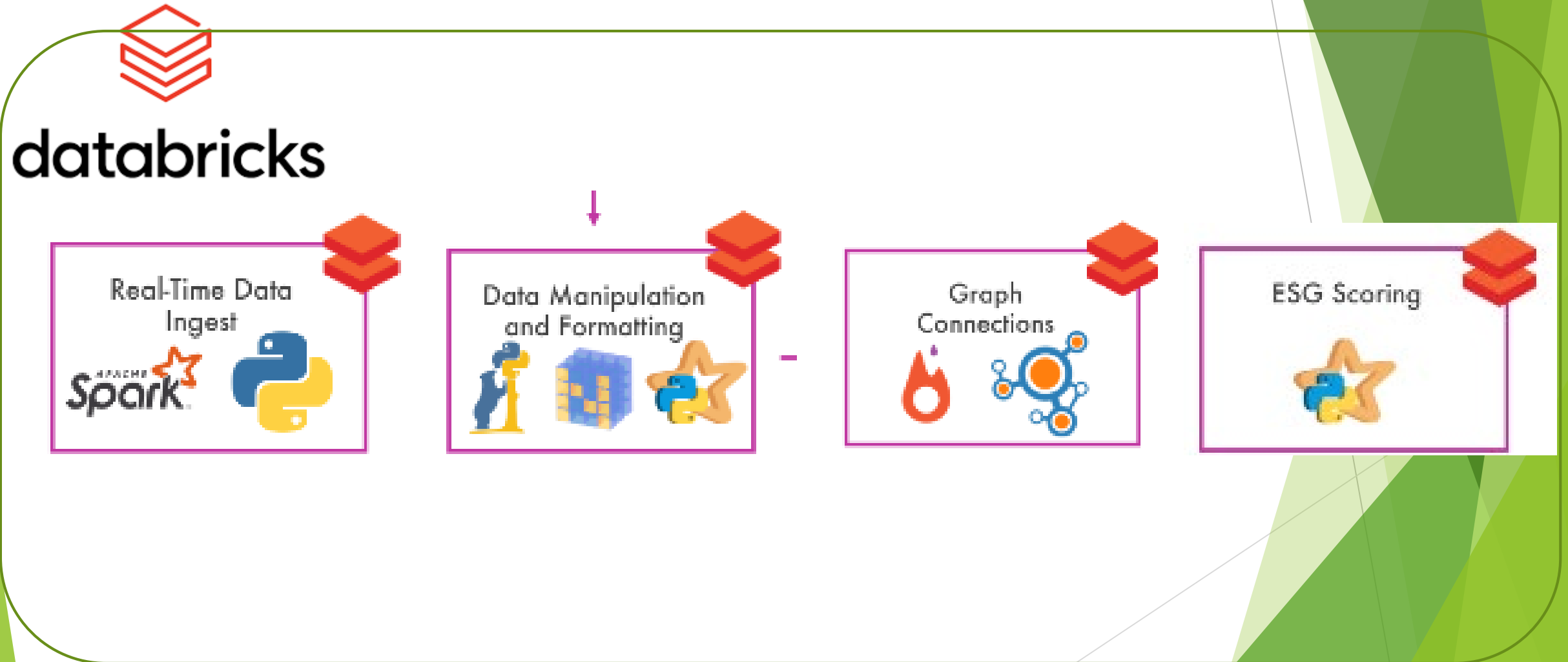
Technical Stack

Data Crawling & Creation

Web Dashboard



Technical Stack Detail for Databricks (Data Crawling & Creation)



Web demo

<https://share.streamlit.io/seong-jihyeon/esg-investment/main.py>