

# **Future of Banking Hackathon**



**Team Lambda**

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# ESG Practices Can Offer Companies A Competitive Advantage

ESG metrics are used to assess a company's exposure to a range of environmental, social and governance risks.

These metrics can be used for a ESG integration approaches, such as benchmarking and scenario analysis.

## SOLID METRICS IN ESG RESULTED IN...

**88%** of companies showcased better operational performance

**80%** of companies showed positively-influenced stock price performance

**90%** of companies showed lowered the cost of capital



## **Main Issues with ESG Ratings**

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- Data is self-reported
- Omissions, unsubstantiated claims and inaccurate figures can be hard to identify and verify
- Complications with the way issues are aggregated
- Setting up policies is different from measurable impact

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## **Business Challenge**

Better assessment of our counterparties through the lenses of E(nvironmental) S(ocial) and G(overnance)



## THE PROBLEM

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- Large volumes of data
- Unstructured Data
- Manual intervention is time-consuming
- No timely capture

## THE PROMISE

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Deliver sentiment analysis over a timeline  
that can reflect impact on business objectives  
and inform future actions

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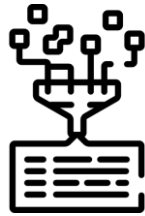


# THE IDEA

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**Capture** the news about each company and perform a litmus test on how they score across ESG parameters



**Calculate** the sentiment against each news item, year-on-year to witness peaks and troughs



**Compare** them to the market and industry standards to determine where they stand against the competition



**Visualize** data points with dynamic tools to base data-driven business decisions that promise to drive higher impact



## THE APPROACH

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- We used the Dow Jones News data which is unsupervised. We listed down keywords using Sustainability Accounting Standards Board, and tracked patterns through research to **tag the data** for ESG. We were able to tag around 6 lakh records out of around a total of 24 lakh records.
- We used **Regex** on the body of the news articles. We built a **CNN-based deep learning** text classification model on the 6 lakh records we were able to tag earlier. The test accuracy is around 93% This model was then used to tag the rest of the data points.
- We did a **sentiment analysis** on the new snippets to get a sentiment score of each news article. We did an empirical study to check accuracy of our results. We calculated the mean sentiment score for each day for every company and industry in the data provided.
- From this data, we created a **Tableau visualization** to see how the sentiment scores vary E/S/G for different companies and Industries on a time scale.





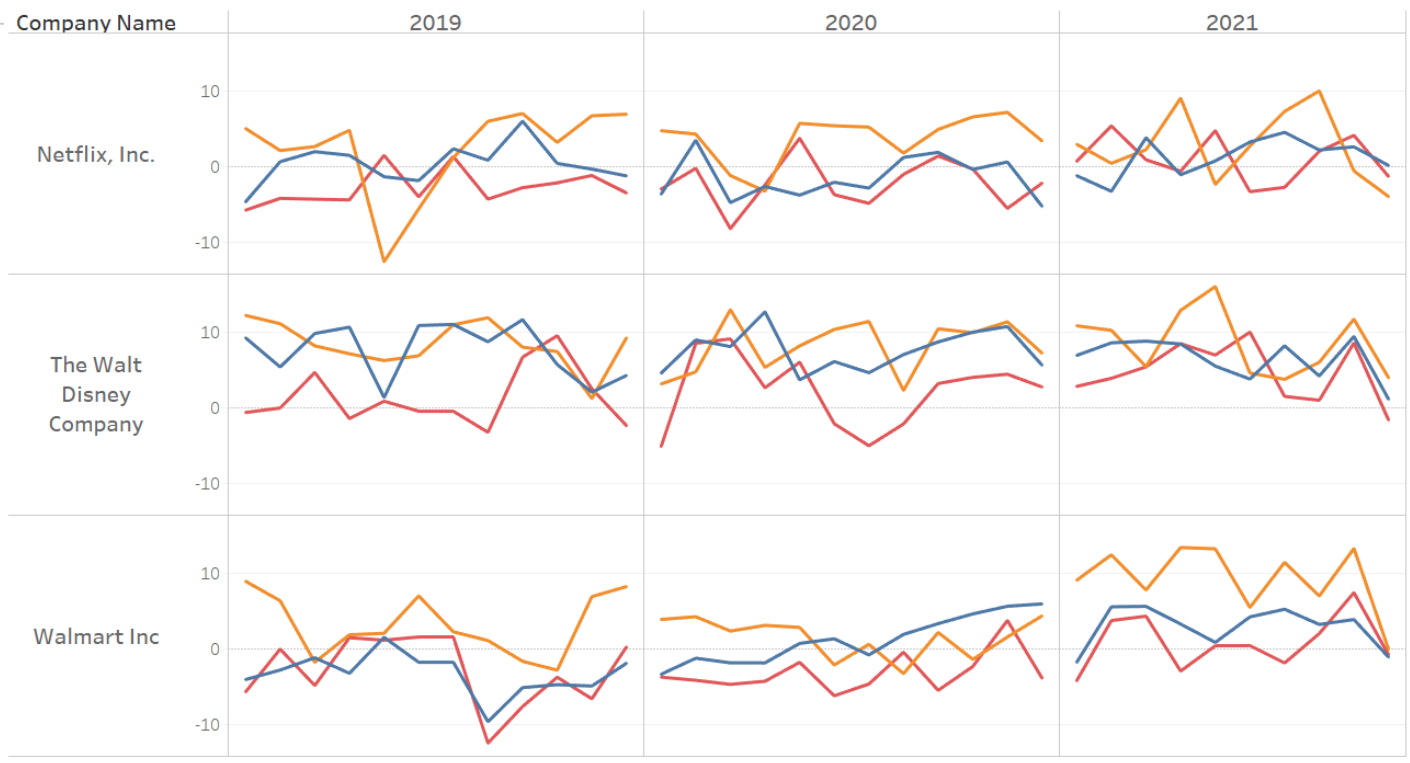
## FEATURES

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- Updated overview of ESG performance of companies
- Automated tagging for continuous, scalable insight models
- Public sentiment scores based on validated news sources
- Time-stamped references and cross-referenced contextual information
- Easy visualization and user-friendly toggles for in-depth views
- Actionable insights and future-ready solutions



## ESG Trends by Company (Per Year)



Measure Names

E Score

G Score

S Score

YEAR(Date)

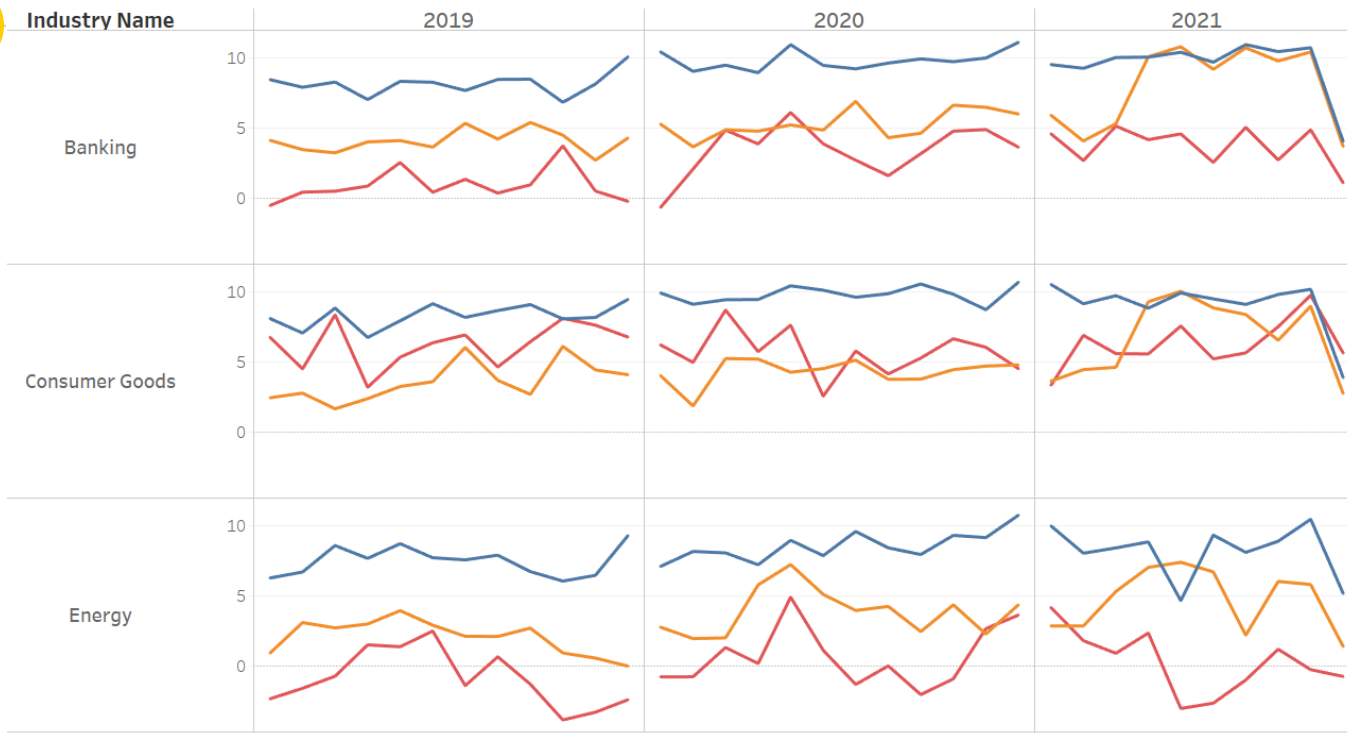
(Multiple values)

Company Name

(Multiple values)



## ESG Trends By Industry (Per Year)



Measure Names

E Score

G Score

S Score

YEAR(Date)

(Multiple values)

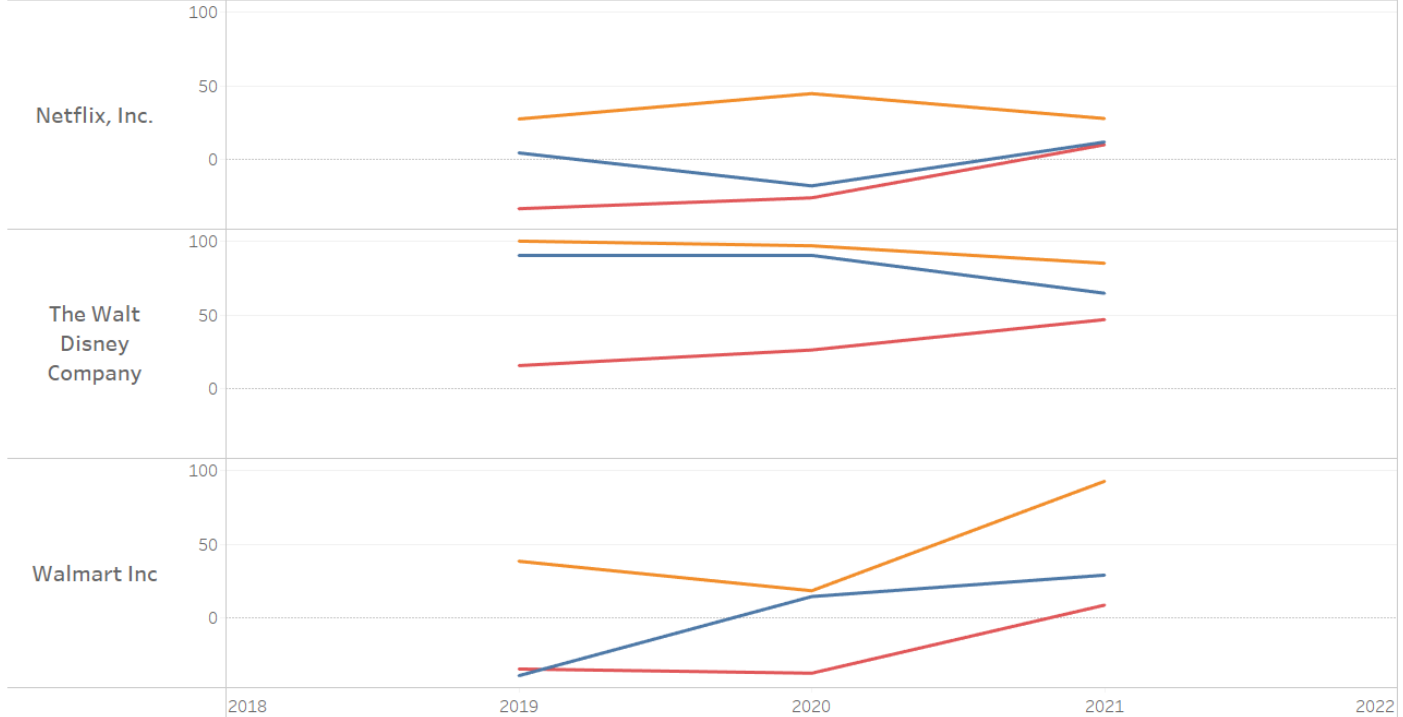
Industry Name

(Multiple values)

## ESG Trends by Company (Across Years)



Company Name



Measure Names

- E Score
- G Score
- S Score

YEAR(Date)

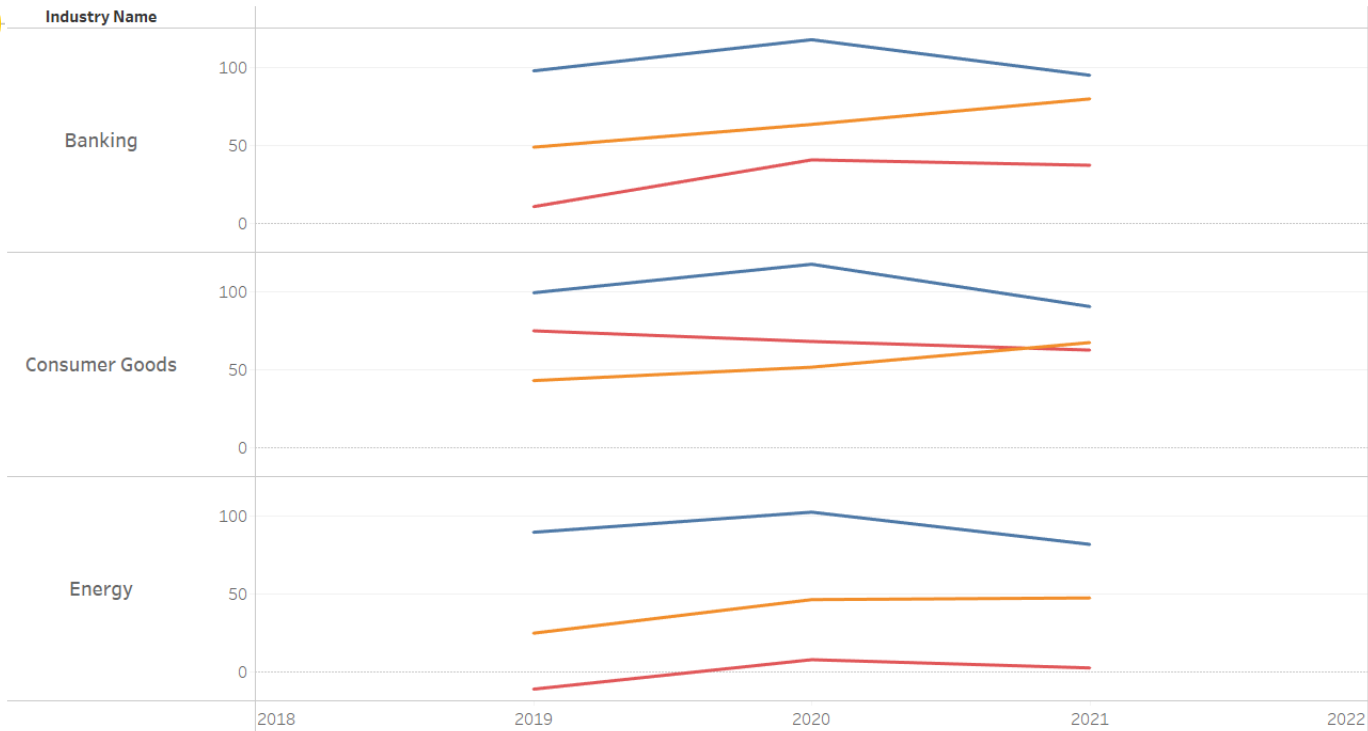
(Multiple values)

Company Name

(Multiple values)



## ESG Trends By Industry (Across Years)



Measure Names

E Score

G Score

S Score

YEAR(Date)

2019

2020

2021

Industry Name

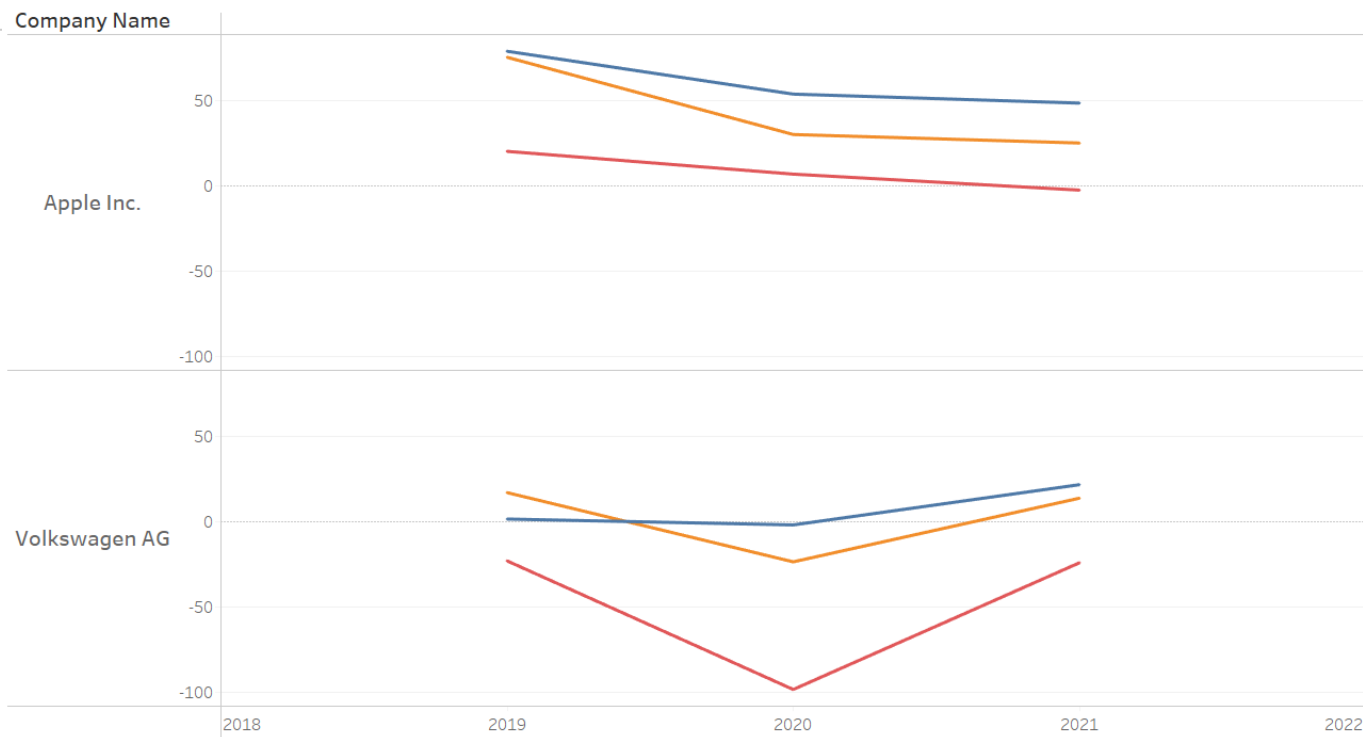
Banking

Consumer Goods

Energy



## ESG Trends by Company (Across Years)



Measure Names

- E Score
- G Score
- S Score

YEAR(Date)

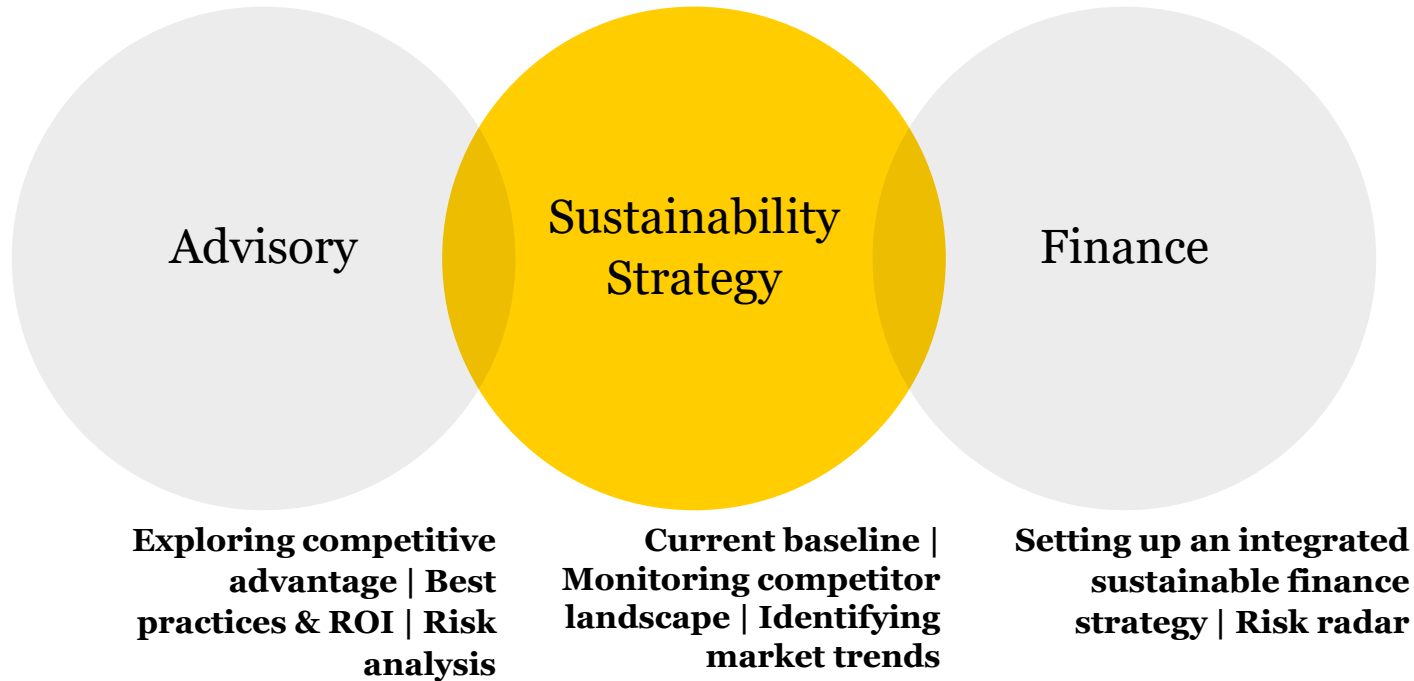
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Company Name

(Multiple values) ▼



## USE CASES





*Public and regulatory expectations are changing.  
Competitive banks are developing customised product offerings to meet the new demand.*

What actions can CS teams in Advisory, Sustainability and Finance suggest to clients that are backed by data?

Advisory – To react to market trends

Sustainability – Proactive strategies to recover from crises or build goodwill through sustainable efforts

Finance – Take actions informed by risk and return





## FUTURE SCOPE

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### More data

Scale up to handle more data, more varied sources and rigorous tagging improvements

### Better scoring

Fine-tuning the models to improve sentiment scores, spot trends and track it to market events

### Real-time trackers

Develop data pipelines for Live exploration into reasons for peaks and troughs



Open to questions...