



# Interactive Brokers

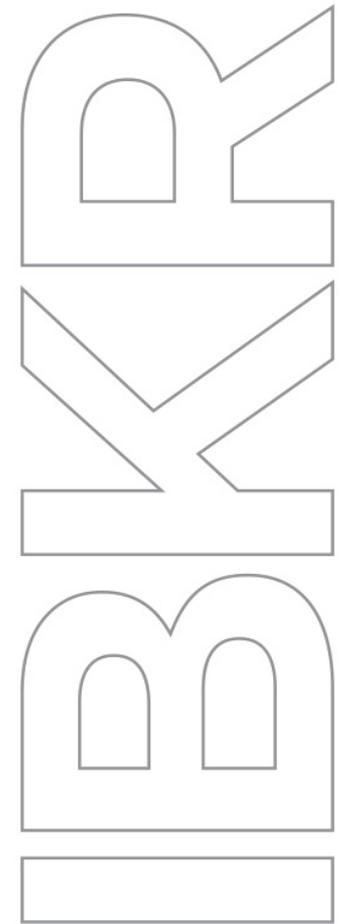
*in conjunction with*

**Accern**

*present:*

## How to Improve your Investment Research and Screening Factors with AI

Anshul Vikram Pandey, Ph.D.  
Co-Founder and CTO, Accern



**February 9, 2021**

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ACCERN

# Accelerate AI Workflows.

Build and deploy AI use cases **3000x** faster with a no-code AI development platform.



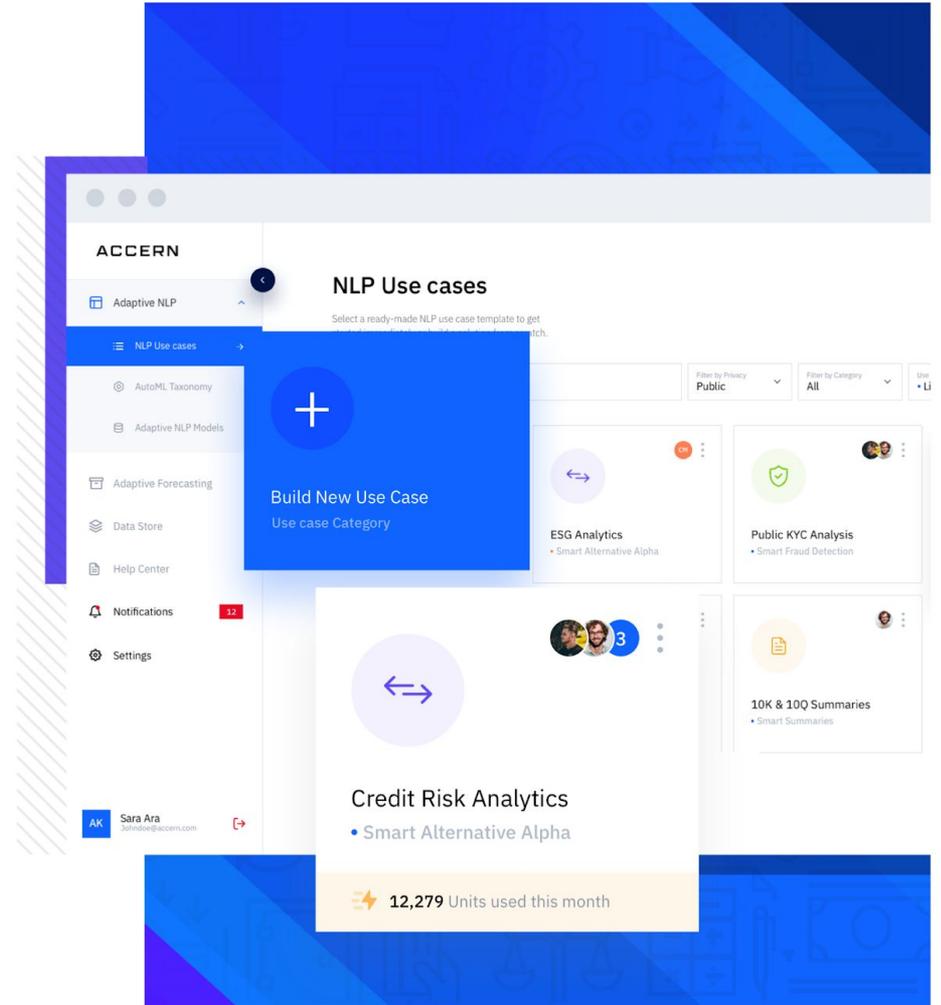
Jefferies



**Anshul Vikram Pandey, Ph.D.**

Co-Founder and CTO, Accern

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# Accern for Financial Services

Accern helps **financial services** become more efficient through its **no-code AI platform** that allows them to **automate workflows** and generate **real-time recommendations**. With one of the industry's **largest collection of news and social media sources**, and **pre-trained analytic models** for finance, Accern has **ready-made solutions** to support risk management for banks, asset management and insurance. Utilizing both AI-powered **natural language processing** and **predictive analytics**, Accern creates workflow automation and risk management solutions for **investment research, credit lending, financial crimes (KYC) and reputational risks**, among others. Organizations can also **customize and personalize all the models**, allowing them to build more finely-tuned systems for each use-case.

## Key Product Highlights:

- **No-Code AI Platform** to automate text processing workflows for financial institutions.
- **Forbes 30 under 30** in Enterprise Technology.
- Specialized in **Natural Language Processing and Predictive Modeling for finance**.
- **Pre-built Models** for capital markets use-case for quick PoC deployments.
- **Ability to Personalize and Fine-tune** models for each use-case independently.
- **Cloud-agnostic, Fully Containerized Deployment** orchestrated via **Docker Swarm** and **Kubernetes**
- Flexible deployment options - **Secured SaaS, Dedicated Private Cloud** or **On-Premise Server**



# How to improve your **investment** **research** and **screening factors** with **AI**

# The Unstructured Data Problem

Financial Services organizations have some of the **largest collections of unstructured data** that remains **unanalyzed**. It is estimated that about **90% of all data** collected at organizations is **unstructured, majority of which is textual\***. These firms **need advanced NLP platforms** to systematically analyze these datasets at scale.

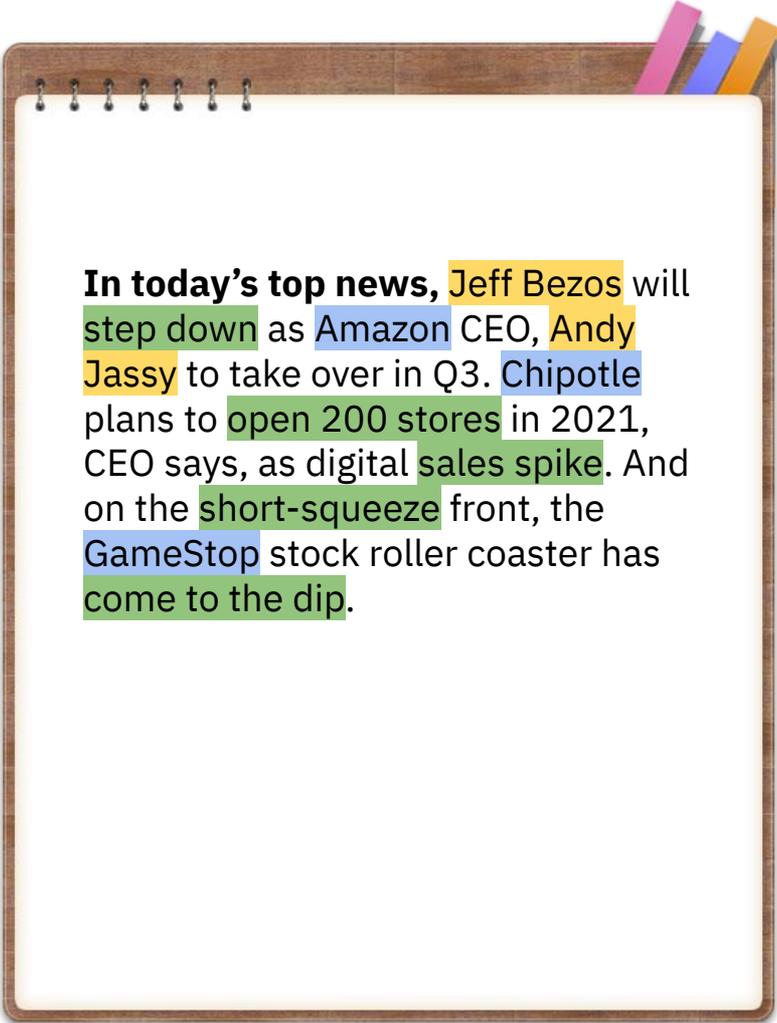
## Preview of what the usual Textual Data Lake at a Financial Services Organization looks like

- News**  
45,000 sources of global, regional and local news.
- Blogs**  
Over 1 billion indexed worldwide blogs.
- Dow Jones**  
Accern News Analytics, Powered By Dow Jones Institutional Newswire
- SEC**  
10Ks real-time SEC filings available to use in your AI solutions.

- Bloomberg**
- FactSet**
- Markit**
- Morningstar**
- Refinitiv**
- S&P Capital IQ**
- SIX Financial**
- Thomson Reuters**
- NewsCred**
- Financial Times**

- Videos**  
A wide array of video hosting sites that hold a massive collection of content.
- Reviews**  
200+ review sites focused on consumer products and travel.
- Message Boards**  
Millions of global communities debating every topic imaginable.
- VKontakte**  
The largest social network and most-visited site in Russia.
- Weibo**  
China's largest public social network.
- Webpages**  
(HTML)
- Data Feed**  
(XML, JSON, CSV)
- Emails**
- Reddit**  
The front page of the internet with deeply engaged community commenting.
- Disqus**  
The largest independent commenting platform reacting to news in real time.
- WordPress**  
Posts and comments from Worldpress.com and popular WP-powered sites globally.
- Verticalscope**  
Hundreds of major communities covering a lot of topics.
- Tencent**  
Reactions to China's news.
- Powerpoint**  
(PPT)
- PDFs**  
(PDF)
- Text Files**  
(TXT)

\*<https://www.wired.com/insights/2014/07/rewiring-tackle-unstructured-data/>  
\*<https://www.cio.com/article/2941015/solving-the-unstructured-data-challenge.html>



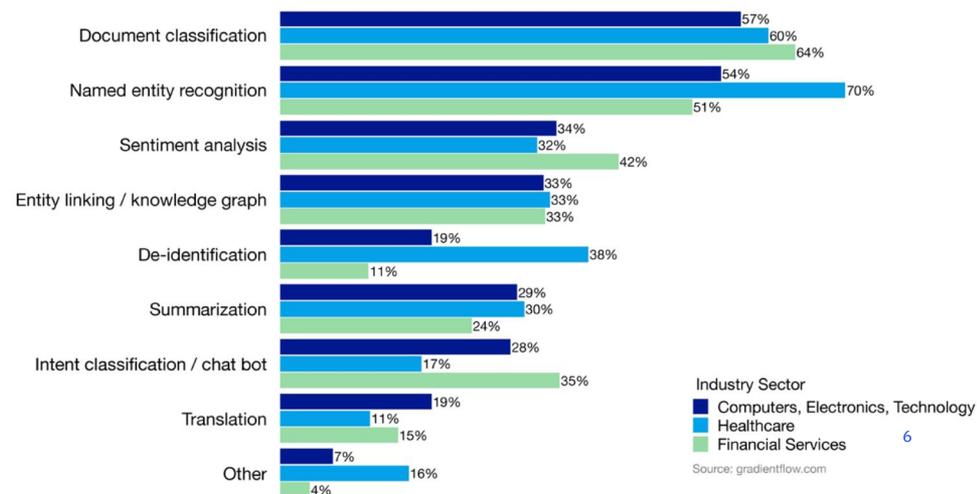
**In today's top news,** Jeff Bezos will step down as Amazon CEO, Andy Jassy to take over in Q3. Chipotle plans to open 200 stores in 2021, CEO says, as digital sales spike. And on the short-squeeze front, the GameStop stock roller coaster has come to the dip.

- What are the key **themes** in this article?
- What is the overall **sentiment** of this article?
- What is the **sentiment of each theme** within this article?
- What does this article say about a **specific company**, like Apple?
- What does this article say about a **specific theme**, like short-squeeze?

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What are the main types of NLP use cases that your production system supports? [choose all that apply]



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*Traditional  
Approach* →

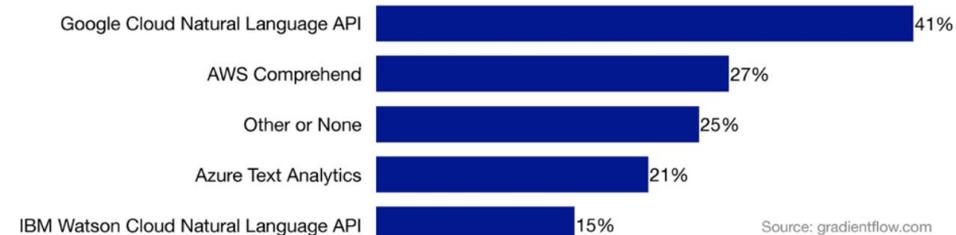
***Most of the time you settle  
for document-level  
analysis***

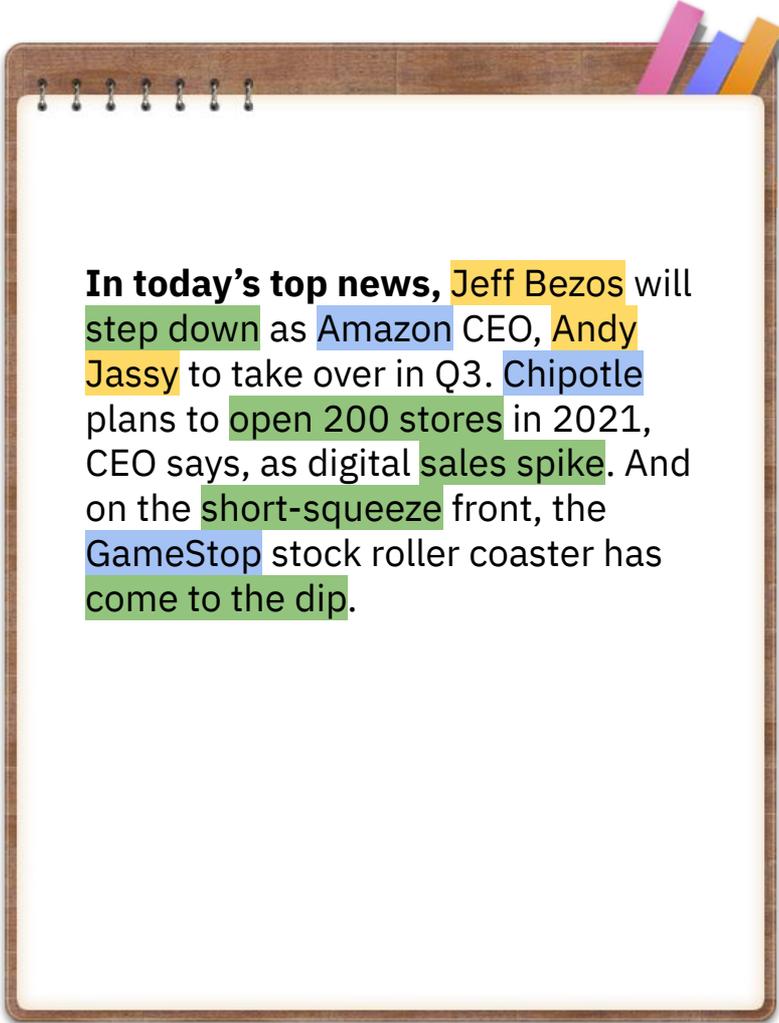
Sentiment = **0.00**

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### *Lots of popular tools available*

Which NLP cloud services does your organization use? [check all that apply]





Google  
NLP

In today's top (news)<sub>2</sub>, (Jeff Bezos)<sub>3</sub> will step down as (Amazon)<sub>5</sub> (CEO)<sub>1</sub>, (Andy Jassy)<sub>1</sub> to take over in (Q3)<sub>6</sub>. (Chipotle)<sub>10</sub> plans to open (200)<sub>15</sub> (stores)<sub>4</sub> in (2021)<sub>14</sub> (2021)<sub>16</sub>. (CEO)<sub>9</sub> says, as digital (sales spike)<sub>13</sub>. And on the short-squeeze (front)<sub>7</sub>, the (GameStop)<sub>12</sub> (stock roller coaster)<sub>8</sub> has come to the (dip)<sub>11</sub>.

1. Andy Jassy <a href="#">Wikipedia Article</a> Saliency: 0.32	PERSON	2. news Saliency: 0.24	OTHER
3. Jeff Bezos <a href="#">Wikipedia Article</a> Saliency: 0.15	PERSON	4. stores Saliency: 0.07	LOCATION
5. Amazon <a href="#">Wikipedia Article</a> Saliency: 0.06	ORGANIZATION	6. Q3 <a href="#">Wikipedia Article</a> Saliency: 0.04	CONSUMER GOOD
7. front Saliency: 0.02	OTHER	8. stock roller coaster Saliency: 0.02	PERSON
9. CEO <a href="#">Wikipedia Article</a> Saliency: 0.02	PERSON	10. Chipotle <a href="#">Wikipedia Article</a> Saliency: 0.02	ORGANIZATION
11. dip Saliency: 0.02	OTHER	12. GameStop <a href="#">Wikipedia Article</a> Saliency: 0.01	ORGANIZATION
13. sales spike Saliency: 0.01	OTHER	14. 2021	
15. 200 Saliency: 0.01	NUMBER	16. 2021 Saliency: 0.01	NUMBER

Score Range



Entity Level Sentiment

1. Andy Jassy Sentiment: Score 0 Magnitude 0	PERSON	2. news Sentiment: Score 0 Magnitude 0	OTHER
3. Jeff Bezos Sentiment: Score 0 Magnitude 0	PERSON	4. stores Sentiment: Score 0 Magnitude 0	LOCATION
5. Amazon Sentiment: Score 0 Magnitude 0	ORGANIZATION	6. Q3 Sentiment: Score 0 Magnitude 0	CONSUMER GOOD
7. front Sentiment: Score 0 Magnitude 0	OTHER	8. stock roller coaster Sentiment: Score -0.1 Magnitude 0.1	PERSON
9. CEO Sentiment: Score 0 Magnitude 0	PERSON	10. Chipotle Sentiment: Score 0 Magnitude 0	ORGANIZATION
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13. sales spike Sentiment: Score 0 Magnitude 0	OTHER		

Google  
NLP

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Jeff Bezos will step down as Amazon CEO, Andy Jassy to take over in Q3.

Entity = AMZN (FIGI, CUSIP, SEDOL)  
 Theme = Management Change  
 Leadership = Jeff Bezos, Andy Jassy  
 Sentiment = +30

*Ideally* →

Entity = CMG (FIGI, ...)  
 Theme = Expansion, Sales  
 Sentiment = +80

Chipotle plans to open 200 stores in 2021, CEO says, as digital sales spike.

And on the short-squeeze front, the GameStop stock roller coaster has come to the dip.

Entity = GME (FIGI, ...)  
 Theme = Short-Squeeze, Stock Activity  
 Sentiment = -60

今日のトップニュースでは、Jeff Bezos が Amazon CEO の Andy Jassy を辞任し、第3四半期に引き継ぎます。Chipotle は、デジタル販売の急増に伴い、2021年に200店舗をオープンする予定であるとCEOは述べています。そして、ショートスクイズのフロントでは、GameStop ストックジェットコースターが急降下しました。

*And then you also need  
Multi-Language support*

Jeff Bezos will step down as Amazon CEO, Andy Jassy to take over in Q3.

Entity = AMZN (FIGI, CUSIP, SEDOL)  
Theme = Management Change  
Leadership = Jeff Bezos, Andy Jassy

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Entity = CMG (FIGI, ...)  
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Sentiment = +80

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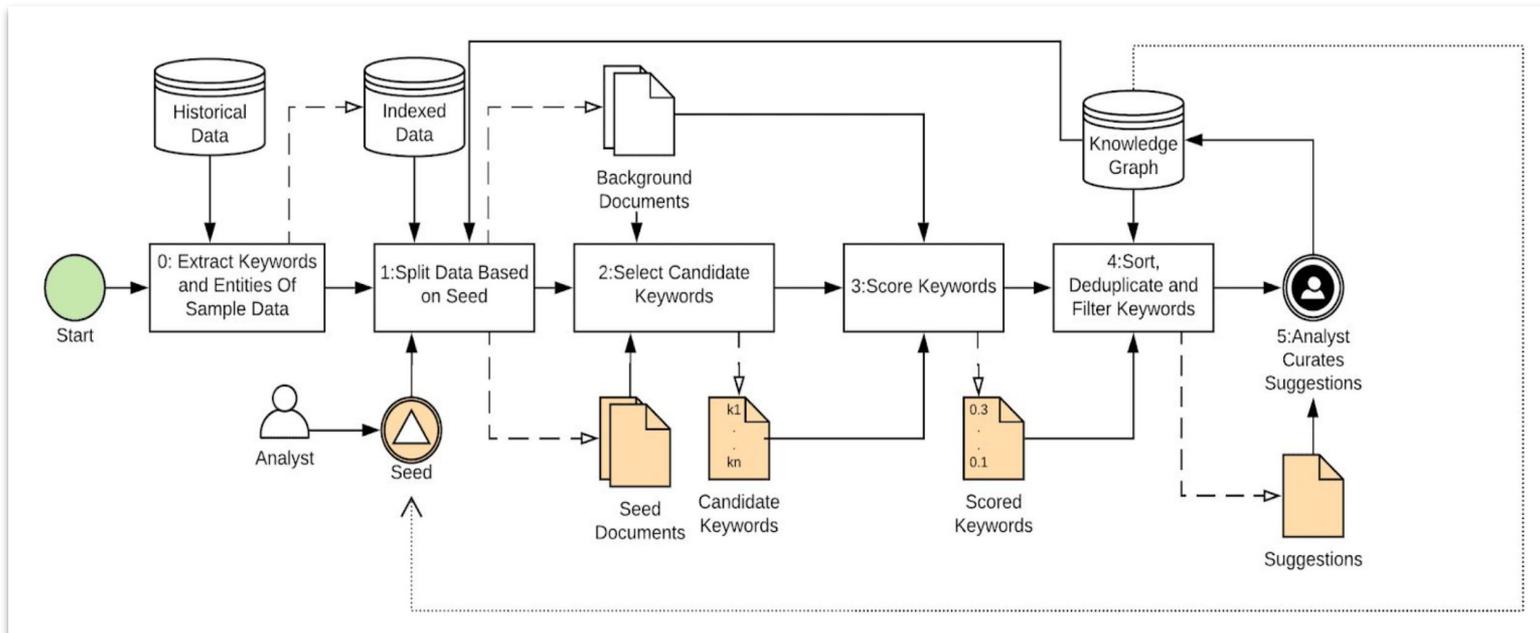
Entity = GME (FIGI, ...)  
Theme = Short-Squeeze, Stock Activity

Sentiment = -60

# A systematic framework to discover, create and refine **entities** & **themes**.

Capabilities

- a. **Discover** entities & themes from a data corpus.
- b. **Refine** existing entities & themes.
- c. Create **domain-specific** entities & themes.
- d. Detect **emerging** entities & themes from streaming data.



$$w_{score} = e^{-1 \frac{\max(\log(bgfreq), \log(seed_{size})) - \log(seedfreq)}{\log(N) - \min(\log(bgfreq), \log(seed_{size}))}}$$

Where,  $N$  is the size of both datasets together;  $bgfreq$  is how frequently the keyword  $w$  appears in the **background** dataset;  $seedfreq$  is how frequently the keyword  $w$  appears in the **seed** dataset and  $seed_{size}$  is the size of the **seed** dataset.

# 1 Word Generation

```
from titan import get_keywords
```

## 1.1 Tesla

Accern's NLP Library

```
ENTITY = "Tesla tsla" # What are the keywords we can use as seed to identify a
↳ first set of documents relevant for this company.
SECTOR = '*' # Sector or any other information that can be used to help the
↳ system identify words that are related but not exclusive to this company (*
↳ ignore parameter)
QUERY_ON="content" # Field used to select documents (options: title, content)
KEYWORDS_FROM="content" # Field used to source keywords (options: title,
↳ content)
MIN_CONFIDENCE=0.1 # Minimal condience score needed in order for the word to be
↳ consider.
MIN_SUPPORT=0.1 # Minimal support score needed in order for the word to be
↳ consider.
```

```
keywords = get_keywords(ENTITY, SECTOR, source=KEYWORDS_FROM,
↳ query_field=QUERY_ON, min_confidence=MIN_CONFIDENCE)
```

keywords

	keyword	score	count	bg_count	support	confidence
0	tesla	0.817983	7980	7980	0.997500	0.964795
1	musk	0.790015	3508	4120	0.438500	0.421615
2	elon	0.778013	3266	3836	0.408250	0.392529
3	elon musk	0.774439	3192	3732	0.399000	0.383705
4	model 3	0.746802	2572	2597	0.321500	0.310857
5	tsla	0.707591	1862	1862	0.232750	0.225119
6	electric car	0.701434	2064	3460	0.258000	0.243820
7	electric vehicle	0.698000	2615	6425	0.326875	0.300543
8	ceo elon	0.662660	1165	1168	0.145625	0.140838
9	ceo elon musk	0.662589	1164	1167	0.145500	0.140717

**Goal:** Create an entity Tesla.

**Input:** "Tesla tsla"

**Output:**  
System detects and recommends additional relevant keywords.

**Findings:** System is able to generate relevant recommendations. You don't see "Nikola Tesla" here. There are also Tesla products that help you improve your Recall.

# 1 Word Generation

```
from titan import get_keywords
```

## 1.1 Tesla

```
ENTITY = "Tesla tsla" # What are the keywords we can use as seed to identify a
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```
keywords
```

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9	ceo elon musk	0.662589	1164	1167	0.145500	0.140717

## 1.2 Apple

```
ENTITY = "Apple AAPL"
SECTOR = '*'
QUERY_ON="title"
KEYWORDS_FROM="content"
MIN_CONFIDENCE=0.1
MIN_SUPPORT=0.1
```

```
keywords = get_keywords(ENTITY, SECTOR, source=KEYWORDS_FROM,
↳query_field=QUERY_ON, min_confidence=MIN_CONFIDENCE)
```

```
keywords
```

	keyword	score	count	bg_count	support	confidence
0	aapl	0.736035	1472	3058	0.292877	0.280344
1	tim cook	0.724483	1166	1510	0.231994	0.225805
2	iphone sale	0.710858	1046	1459	0.208118	0.202138
3	iphone	0.706306	3551	10244	0.706526	0.664542
4	iphone model	0.680799	769	1118	0.153004	0.148422
5	ceo tim cook	0.677637	706	900	0.140470	0.136781
6	iphone maker	0.676875	733	1061	0.145842	0.141493
7	ceo tim	0.675080	719	1047	0.143056	0.138765
8	apple watch	0.668030	684	1091	0.136092	0.131621
9	ipad	0.660537	795	2123	0.158177	0.149477

## 2 Automated Seed Expansion

### 2.1 Nestle

```

query = ["nestle"]
sector = "food"
for i in range(10):
    keywords = get_keywords(query, sector,
    ↪source="content", query_field="content", min_confidence=0.1)
    sel = [k for k in keywords["keyword"] if k not in query][0:1]
    if len(sel) > 0:
        print("==> Step", i)
        print("Current keywords/seed", query)
        query = query + sel
    else:
        break

```

*Looking for additional keyword recommendations for “Nestle”, given the background as “Food”.*

```

==> Step 0
Current keywords/seed ['nestle']
==> Step 1
Current keywords/seed ['nestle', 'nestle sa']
==> Step 2
Current keywords/seed ['nestle', 'nestle sa', 'unilever']
==> Step 3
Current keywords/seed ['nestle', 'nestle sa', 'unilever', 'procter']
==> Step 4
Current keywords/seed ['nestle', 'nestle sa', 'unilever', 'procter', 'procter
gamble']

```

### 2.2 Final Keyword suggestions

query

['nestle', 'nestle sa', 'unilever', 'procter', 'procter gamble', 'pg']

*We also get competitors and parent companies*

# AutoML Taxonomy

## PRE-BUILT FINANCE TAXONOMY

We take care of the time-consuming process of building out a taxonomy for the financial service industry.



Public Companies  
40,000+



Private Companies  
10,000+



Cryptocurrencies  
100+



Forex  
19+



C-Suite Executives  
10,000+



Products  
20,000+



Theme Classifiers  
35+



Financial Events  
200+



Subsidiaries  
10,000+



Commodities  
60+

***We used a similar framework to build a large catalog of entities and themes with minimal manual intervention. :)***

## Taxonomy

Choose from a collection of a pre-trained taxonomy focused on the financial service industry.

Monthly Units Used  
**1,824,783/100,000,000**

Find a Taxonomy



Upload CSV

New

- US Equity
- International Equity
- Cryptocurrency
- Forex
- Commodity
- Themes

All US Equity

- Asset Classification (16679)
- Indices (5535)
  - DJIA

3M Company

American Express Company

Apple Inc

Caterpillar Inc

Chevron Corporation

Cisco Systems, Inc.

Coca-Cola Company (The)

In the demo, we will show the AutoML Taxonomy framework live by creating a new theme/entity and using it to analyze Public News articles.

*Example Use-Case:*

## Using **theme exposure** in news & blogs as an indicator of attractiveness.

Summary

- a. Select/create the required themes and entities using the **AutoML Taxonomy framework**.
- b. **Analyze public news and blogs** dataset for articles about those entities and themes.
- c. **Establish a baseline** of chatter around each entity, theme and entity+theme pair.
- d. **Calculate the exposure** using an anomaly detection or binning method to check if an entity/theme is interesting.

OpenFIGI Identifier	entity_name	Environment - Clean Water	Macroeconomy	Macroeconomy - Ageing Demographic Spend	Social - Urbanization	Consumer Health & Wellness	Artificial Intelligence	Clean Tech	Cyber Security	E-commerce	Education	Electric Vehicle	Fin Tech	Healthcare IT	Med Tech	Solar Energy	Grand Total
BBG0015SRTW7	Home Depot, Inc. (The)	0.00%	0.00%	26.25%	0.00%	0.00%	0.00%	0.00%	48.75%	13.75%	0.00%	0.00%	0.00%	0.00%	11.25%	100.00%	
BBG0015SRTY5	Harley-Davidson, Inc.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.52%	81.48%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015SS0N9	Harris Corporation	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5148	Hershey Company (The)	0.00%	0.00%	29.41%	70.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S51X6	Humana Inc.	0.00%	0.00%	0.00%	94.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5399	International Business Machines Corporat	0.00%	0.00%	2.59%	0.61%	49.53%	0.00%	3.53%	5.65%	3.39%	0.00%	33.57%	0.61%	0.52%	0.00%	100.00%	
BBG0015S55F7	Internationa Flavors & Fragrances, Inc.	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5BF4	International Paper Company	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.71%	0.00%	64.29%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5BV6	Ingersoll-Rand plc (Ireland)	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5CD4	Autodesk Inc	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5F65	Intel Corporation	0.00%	0.00%	8.25%	0.00%	51.55%	0.00%	11.90%	3.37%	3.28%	2.16%	19.49%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5FY4	J.B. Hunt Transport Services, Inc.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5G63	J.C. Penney Company, Inc.	0.00%	0.00%	0.00%	42.31%	0.00%	0.00%	0.00%	15.38%	42.31%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5HB5	Jack Henry & Associates, Inc.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5HQ9	Johnson & Johnson	0.00%	3.23%	3.80%	11.41%	0.00%	0.00%	0.00%	4.18%	9.89%	0.00%	0.00%	45.25%	22.24%	0.00%	100.00%	
BBG0015S5JG6	Oracle Corporation	0.00%	0.00%	13.60%	0.00%	43.95%	0.00%	0.00%	13.27%	8.62%	0.00%	20.56%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5JL0	Kellogg Company	0.00%	0.00%	11.11%	18.52%	11.11%	0.00%	0.00%	22.22%	37.04%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5JV9	KB Home	0.00%	43.75%	31.25%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5KV6	KeyCorp	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5LZ0	Kimberly-Clark Corporation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5N40	Kroger Company (The)	0.00%	0.00%	16.03%	12.21%	25.95%	0.00%	0.00%	38.93%	6.87%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5P18	Kyocera Corporation	0.00%	0.00%	0.00%	0.00%	44.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.56%	100.00%	
BBG0015S5RK3	Lennar Corporation	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5TL8	Eli Lilly and Company	0.00%	0.00%	0.00%	17.54%	0.00%	0.00%	0.00%	0.00%	12.28%	0.00%	0.00%	0.00%	70.18%	0.00%	100.00%	
BBG0015S5TM7	Legg Mason, Inc.	0.00%	0.00%	53.85%	0.00%	0.00%	0.00%	0.00%	0.00%	46.15%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5TN6	Cognizant Technology Solutions Corporati	0.00%	0.00%	16.28%	0.00%	60.47%	0.00%	0.00%	0.00%	0.00%	0.00%	23.26%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5VL3	Lowe's Companies, Inc.	0.00%	0.00%	38.64%	0.00%	0.00%	13.64%	0.00%	47.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5WL1	L Brands, Inc.	0.00%	0.00%	15.15%	30.30%	0.00%	0.00%	0.00%	30.30%	24.24%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5XC9	Southwest Airlines Company	0.00%	0.00%	37.50%	0.00%	0.00%	0.00%	0.00%	0.00%	62.50%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5Y91	MAGNA INTERNATIONAL INC	0.00%	0.00%	44.44%	0.00%	0.00%	0.00%	0.00%	18.52%	0.00%	37.04%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5YB8	BASF SE	0.00%	0.00%	30.83%	5.83%	0.00%	20.83%	0.00%	10.00%	8.33%	10.83%	5.00%	0.00%	8.33%	0.00%	100.00%	
BBG0015S5YP3	ACCOR SA	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015S5ZF1	Mattel, Inc.	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	85.71%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015ST110	McDonald's Corporation	0.00%	0.00%	16.34%	7.39%	24.51%	0.00%	0.00%	24.12%	20.23%	7.39%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015ST259	Medtronic plc	0.00%	0.00%	0.00%	0.00%	7.27%	0.00%	5.01%	0.00%	0.00%	0.00%	0.00%	27.32%	60.40%	0.00%	100.00%	
BBG0015ST3R8	MetLife, Inc.	0.00%	12.12%	0.00%	0.00%	15.15%	15.15%	0.00%	0.00%	15.15%	0.00%	42.42%	0.00%	0.00%	0.00%	100.00%	
BBG0015ST4S5	DEUTSCHE TELEKOM AG	0.00%	0.00%	0.00%	0.00%	81.45%	0.00%	0.00%	0.00%	0.00%	0.00%	18.55%	0.00%	0.00%	0.00%	100.00%	
BBG0015ST5M8	S&P Global Inc.	0.00%	0.00%	25.56%	0.00%	4.47%	7.03%	4.79%	6.39%	32.27%	0.00%	10.54%	0.00%	4.79%	4.15%	100.00%	
BBG0015ST7X2	3M Company	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.45%	54.55%	0.00%	100.00%	
BBG0015ST8T5	ALTRIA GROUP INC	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015ST9L1	Motorola Solutions, Inc.	0.00%	0.00%	13.33%	0.00%	58.33%	0.00%	10.00%	18.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
BBG0015STCS2	MERCK & CO. INC.	0.00%	0.00%	10.12%	9.52%	11.90%	0.00%	0.00%	0.00%	0.00%	0.00%	10.12%	7.14%	51.19%	0.00%	100.00%	
BBG0015STD05	Microsoft Corporation	0.00%	0.00%	8.23%	0.57%	62.98%	1.26%	3.37%	2.61%	6.16%	0.69%	11.12%	1.71%	0.72%	0.57%	100.00%	

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OpenFIGI Identifier	entity_name	Environment - Clean Water	Macroconomy - Ageing	Macroconomy - Demographic Spend	Social - Urbanization	Technology - Consumer Health & Wellness	Technology - Artificial Intelligence	Technology - Clean Tech	Technology - Cyber Security	Technology - E-commerce	Technology - Education	Technology - Electric Vehicle	Technology - FinTech	Technology - Healthcare IT	Technology - MedTech	Technology - Solar Energy	Grand Total
BBG00155RTW7	Home Depot, Inc. (The)	0.00%	0.00%	26.25%	0.00%	0.00%	0.00%	0.00%	48.75%	13.75%	0.00%	0.00%	0.00%	0.00%	0.00%	11.25%	100.00%
BBG00155RTY5	Harley-Davidson, Inc.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.57%	81.48%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155SON9	Harris Corporation	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S148	Hershey Company (The)	0.00%	0.00%	29.41%	70.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S1X6	Humana Inc.	0.00%	0.00%	0.00%	94.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.88%	0.00%	0.00%	0.00%	100.00%
BBG00155S399	International Business Machines Corporat	0.00%	0.00%	2.59%	0.61%	49.53%	0.00%	3.53%	5.65%	3.39%	0.00%	33.57%	0.61%	0.52%	0.00%	0.00%	100.00%
BBG00155S5F7	Intemationa Flavors & Fragrances, Inc.	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5F4	International Paper Company	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	35.71%	0.00%	64.29%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5BV6	Ingersoll-Rand plc (Ireland)	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5CD4	Autodesk Inc	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5F65	Intel Corporation	0.00%	0.00%	8.25%	0.00%	51.55%	0.00%	11.90%	3.37%	3.28%	2.16%	19.49%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5FY4	J.B. Hunt Transport Services, Inc.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5G63	J.C. Penney Company, Inc.	0.00%	0.00%	0.00%	42.31%	0.00%	0.00%	0.00%	15.38%	42.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5HB5	Jack Henry & Associates, Inc.	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5HQ9	Johnson & Johnson	0.00%	3.23%	3.80%	11.41%	0.00%	0.00%	0.00%	4.18%	9.89%	0.00%	0.00%	45.25%	22.24%	0.00%	0.00%	100.00%
BBG00155S5JG6	Oracle Corporation	0.00%	0.00%	13.60%	0.00%	43.95%	0.00%	0.00%	13.27%	8.62%	0.00%	20.56%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5JL0	Kellogg Company	0.00%	0.00%	11.11%	18.52%	11.11%	0.00%	0.00%	22.22%	37.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5JV9	KB Home	0.00%	43.75%	31.25%	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5KV6	KeyCorp	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5LZ0	Kimberly-Clark Corporation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5N40	Kroger Company (The)	0.00%	0.00%	16.03%	12.21%	25.95%	0.00%	0.00%	38.93%	6.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5P18	Kyocera Corporation	0.00%	0.00%	0.00%	0.00%	44.44%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	55.56%	0.00%	100.00%
BBG00155S5RK3	Lennar Corporation	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5TL8	Eli Lilly and Company	0.00%	0.00%	0.00%	17.54%	0.00%	0.00%	0.00%	0.00%	12.28%	0.00%	0.00%	0.00%	70.18%	0.00%	0.00%	100.00%
BBG00155S5TM7	Legg Mason, Inc.	0.00%	0.00%	53.85%	0.00%	0.00%	0.00%	0.00%	0.00%	46.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5TN6	Cognizant Technology Solutions Corporati	0.00%	0.00%	16.28%	0.00%	60.47%	0.00%	0.00%	0.00%	0.00%	0.00%	23.26%	7%	0.00%	0.00%	0.00%	100.00%
BBG00155S5VL3	Lowe's Companies, Inc.	0.00%	0.00%	38.64%	0.00%	0.00%	13.64%	0.00%	47.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5WL1	L Brands, Inc.	0.00%	0.00%	15.15%	30.30%	0.00%	0.00%	0.00%	30.30%	24.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5XC9	Southwest Airlines Company	0.00%	0.00%	37.50%	0.00%	0.00%	0.00%	0.00%	0.00%	62.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5Y91	MAGNA INTERNATIONAL INC	0.00%	0.00%	44.44%	0.00%	0.00%	0.00%	0.00%	18.52%	0.00%	37.04%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5YB8	BASF SE	0.00%	0.00%	30.83%	5.83%	0.00%	20.83%	0.00%	10.00%	8.33%	10.83%	5.00%	0.00%	8.33%	0.00%	0.00%	100.00%
BBG00155S5YP3	ACCOR SA	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155S5ZF1	Mattel, Inc.	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	0.00%	0.00%	85.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155T110	McDonald's Corporation	0.00%	0.00%	16.34%	7.39%	24.51%	0.00%	0.00%	24.12%	20.23%	7.39%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155T259	Medtronic plc	0.00%	0.00%	0.00%	0.00%	7.27%	0.00%	5.01%	0.00%	0.00%	0.00%	0.00%	27.32%	60.40%	0.00%	0.00%	100.00%
BBG00155T3R8	MetLife, Inc.	0.00%	12.12%	0.00%	0.00%	15.15%	15.15%	0.00%	0.00%	15.15%	0.00%	42.42%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155T4S5	DEUTSCHE TELEKOM AG	0.00%	0.00%	0.00%	0.00%	81.45%	0.00%	0.00%	0.00%	0.00%	0.00%	18.55%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155T5M8	S&P Global Inc.	0.00%	0.00%	25.56%	0.00%	4.47%	7.03%	4.79%	6.39%	32.27%	0.00%	10.54%	0.00%	4.79%	0.00%	4.15%	100.00%
BBG00155T7X2	3M Company	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.45%	54.55%	0.00%	0.00%	100.00%
BBG00155T8T5	ALTRIA GROUP INC	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155T9L1	Motorola Solutions, Inc.	0.00%	0.00%	13.33%	0.00%	58.33%	0.00%	10.00%	18.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
BBG00155TCS2	MERCK & CO. INC	0.00%	0.00%	10.12%	9.52%	11.90%	0.00%	0.00%	0.00%	0.00%	0.00%	10.12%	7.14%	51.19%	0.00%	0.00%	100.00%
BBG00155TD05	Microsoft Corporation	0.00%	0.00%	8.23%	0.57%	62.98%	1.26%	3.37%	2.61%	6.16%	0.69%	11.12%	1.71%	0.72%	0.57%	0.00%	100.00%

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# Accern AI Marketplace

1

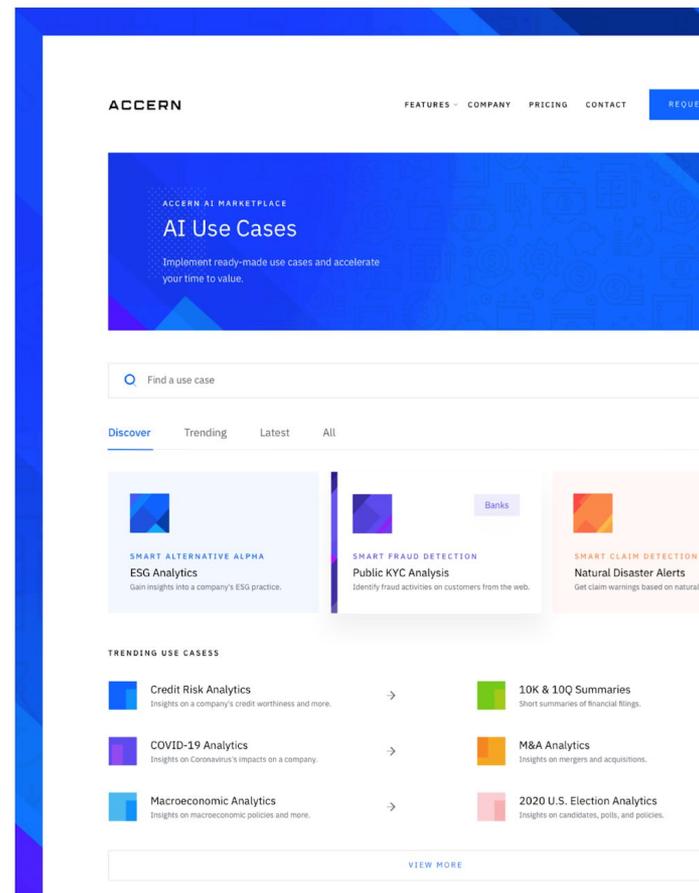
Over 400 Pre-Built AI Use Cases

2

Built for Asset Management, Banking, and Insurance

3

Activate in a single click, edit, and deploy in under a minute.



# ACCERN

## CONTACT INFORMATION

# Get in touch



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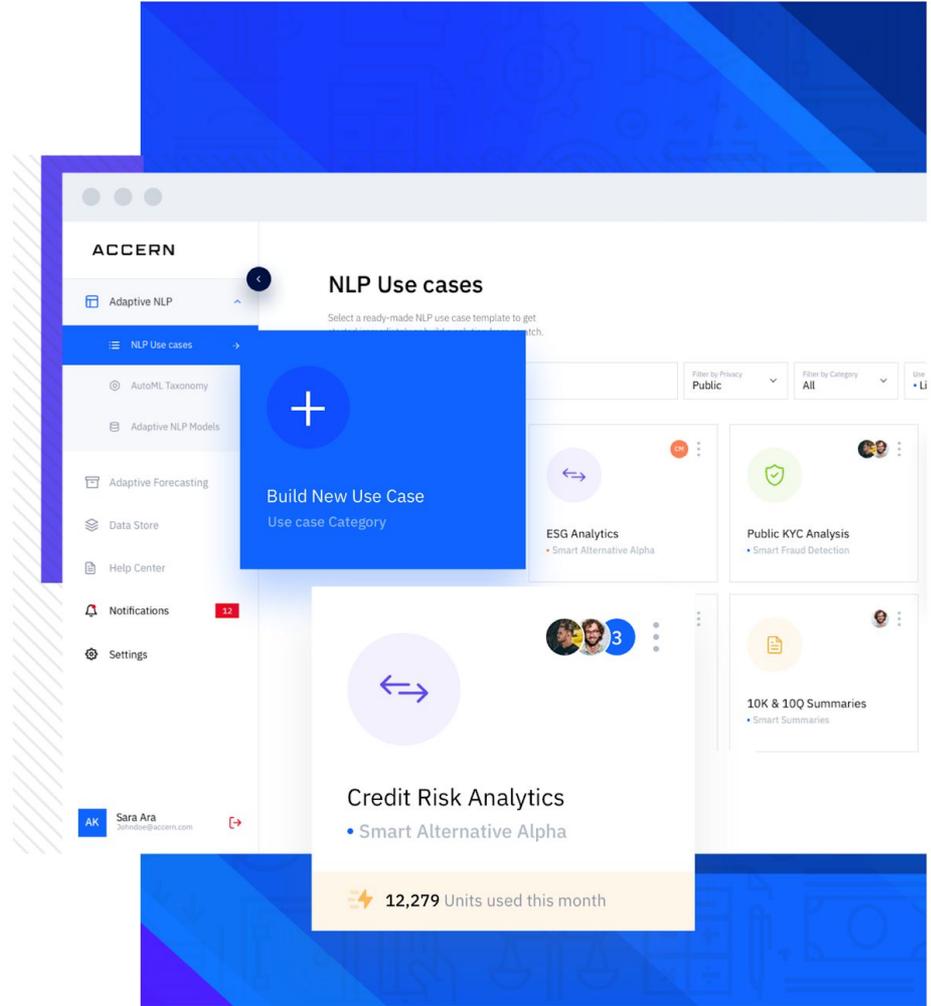
EMAIL  
Info@accern.com



PHONE  
(347) 745-6649



WEBSITE  
accern.com



The screenshot displays the ACCERN user interface for NLP Use cases. At the top, the header reads "ACCERN" and "Adaptive NLP". The main section is titled "NLP Use cases" with a sub-header "Select a ready-made NLP use case template to get started. You can also create a new use case template from scratch." Below this, there are filters for "Filter by Privacy" (Public) and "Filter by Category" (All). A central blue button with a white plus sign is labeled "Build New Use Case" and "Use case Category". The interface shows a list of use case templates, including "ESG Analytics" (Smart Alternative Alpha), "Public KYC Analysis" (Smart Fraud Detection), and "10K & 10Q Summaries" (Smart Summaries). A user profile for Sara Ara (AK) is visible at the bottom left. A yellow banner at the bottom right indicates "12,279 Units used this month".