

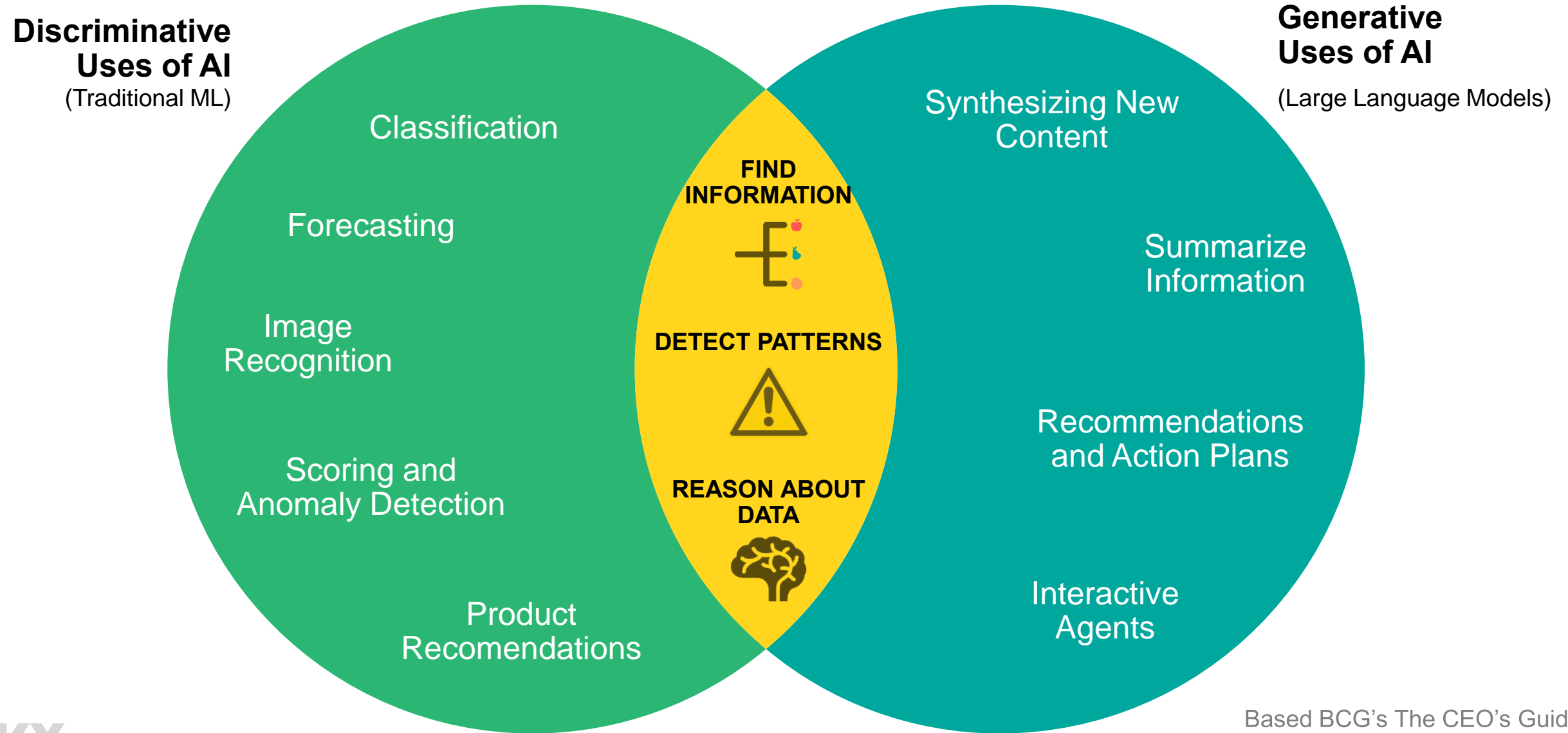


KDB.AI

Combining the power of AI and vector data to unlock organizational wisdom

Pete Kohler

Building Blocks For Modern AI



Discover your company's golden use case

For the CEO, the key is to identify the company's so-called golden use cases that drive competitive advantage

Non-core use cases are table stakes, everyone will adopt them

**CORE OR
"GOLDEN"**
Use Cases

NON-CORE
Use Cases

Strengthen competitive positioning with truly unique use cases that both drive value and are challenging to adopt (i.e., have a barrier to entry for competitors)

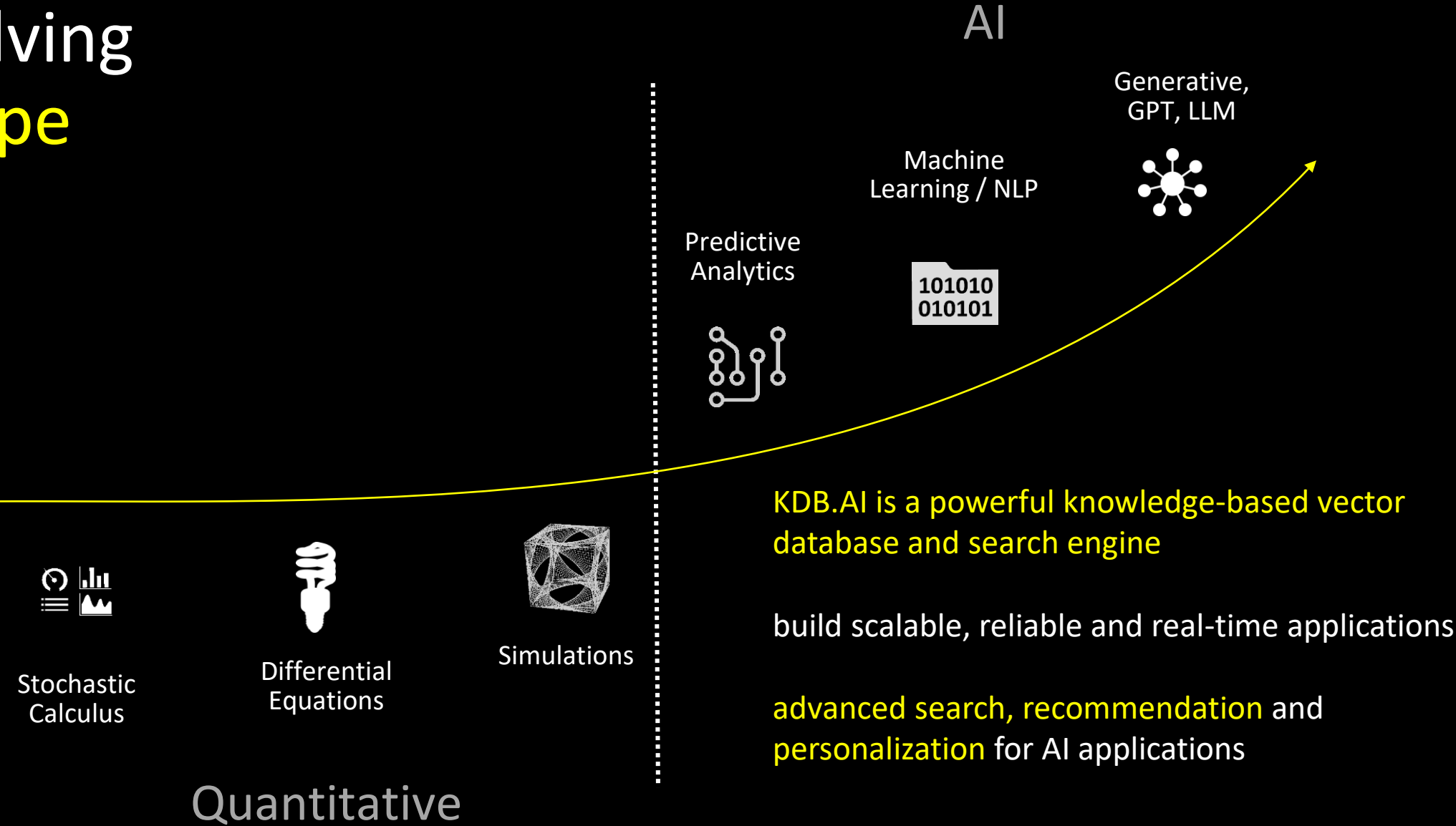
- For e.g., in pharmaceuticals companies, Generative AI can drive core R&D to produce new drugs/molecules at record pace

There is low barrier to adopting use cases that rely on existing LLM applications, but they will be important to keep pace with other organizations

- For e.g., purchasing Generative AI tools that creating automatic summaries of meeting notes

Table-Stakes to use cases will improve efficiency

The Evolving Landscape of AI



Generative

Training Data: Models are trained on vast datasets

Neural Networks: deep neural networks or transformers, which consist of layers of interconnected nodes (neurons).

Learning Patterns: the model learns to generate data by analyzing the patterns present in the training dataset.

Generating New Data: Once trained, generative AI can generate new data that resembles the patterns it has learned

Sampling and Control: Users can interact with generative AI models by providing seed input or specific instructions to guide the generation process. This allows for the generation of customized and controlled outputs, ensuring the AI aligns with the user's intent or desired content.

Discriminative

Data Collection: The first step is to collect a labeled dataset, where each data point is associated with a specific category or class.

Feature Extraction: The AI model extracts relevant features from the input data. These features are characteristics or attributes that help the model differentiate between classes.

Model Training: A machine learning algorithm, often a neural network or a support vector machine, is trained using the labeled dataset.

Prediction: Once the model is trained, it can make predictions on new, unlabeled data

Evaluation and Iteration: The performance of the discriminative AI model is evaluated using various metrics like accuracy, precision, recall, or F1-score

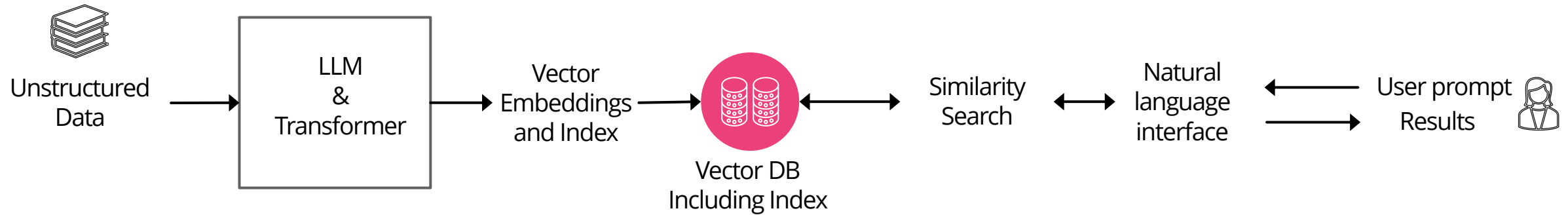
Generative uses of AI: Unstructured: Semantic Search



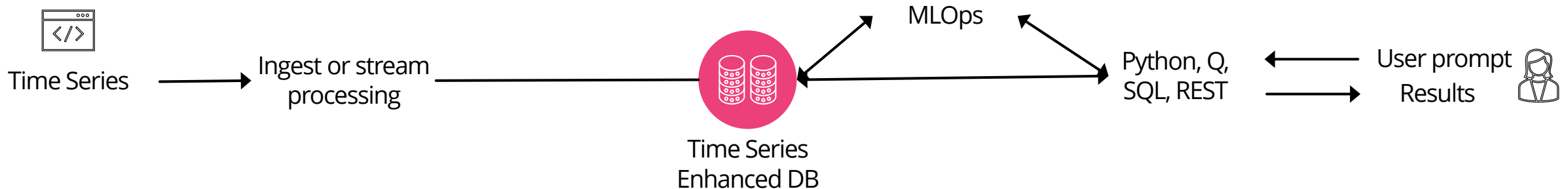
Use cases involving text analysis, summarization, forms or content generation are the sweet spot
Information discovery and knowledge mining E.g. Generative AI tools that create automatic summaries of meeting notes

Today's Technology Stacks are Separate

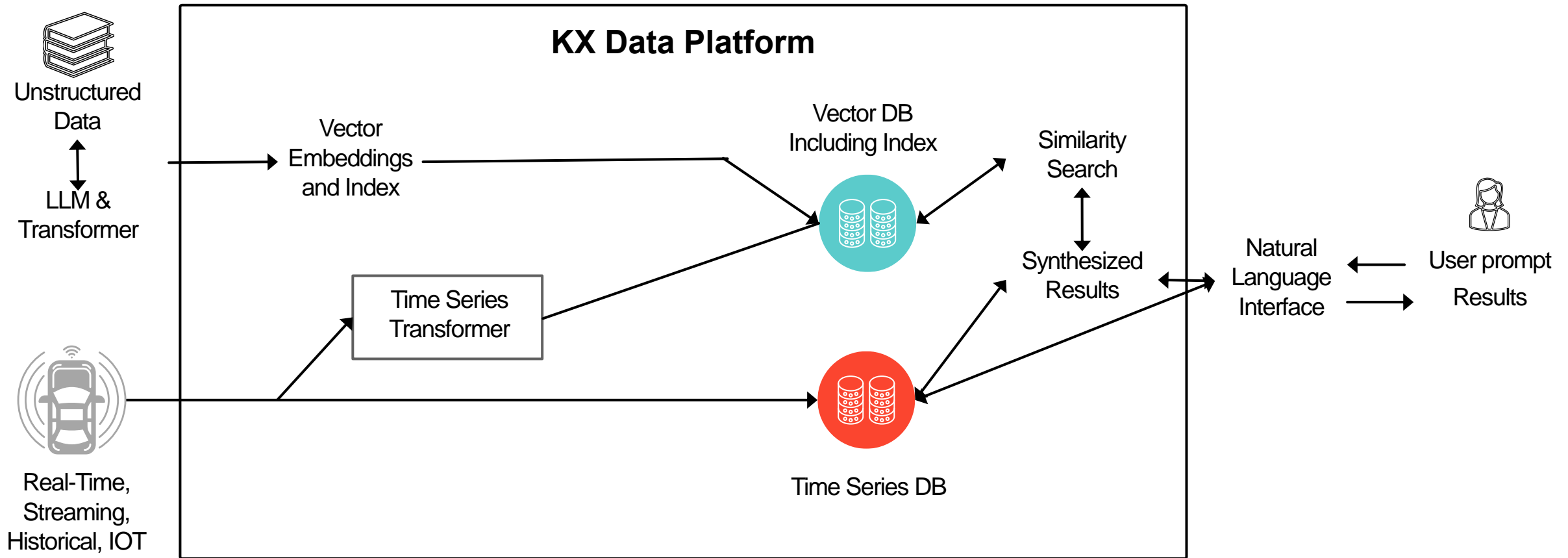
GENERATIVE USES OF AI: **SEMANTIC SEARCH**



DISCRIMINATIVE USES OF AI: **FORECASTING / PREDICTIVE ANALYTICS**



KX: One Data Platform for Traditional & Generative AI Applications



KX Data Platform Use Cases

Real Time Analytics

- Event detection & analysis
- Stream processing
- Real time monitoring
- Data science / exploration
- Predictive analytics
- Real-time aggregation
- Reporting

Vector Database

- Unstructured data search (image, text, video, audio)
- Object detection
- Classification
- Recommendation systems
- Pattern matching & outliers
- Sentiment analysis

Embeddable Engine

- Time series
- Tick data
- Vectorized queries
- Large volume ingestion

kdb.ai: Data Breach Alert Demo

Data Breach Demo

News Stream

time	sym	title
2023-08-02 17:51:10.35224		Maoyan Partners with iQIYI, Weibo to Release 2020 Mid-Year China ... Maoyan Partners with iQIYI, Weibo to Rel
2023-08-02 17:51:00.34653	DIS	When Are New Star Wars Shows Coming to Disney+? - Bloomberg Netflix released "Roma" in theaters and for :
2023-08-02 17:50:50.43442	AIRM	AIR MILES® provides Canadians with more options to book their ... "With thousands of Package Vacations avail
2023-08-02 17:50:40.36774	UBER	Uber Hack: Company Blames Notorious Extortion Gang Lapsus\$ for ...Sep 19, 2022 ... Uber Technologies Inc. sai
2023-08-02 17:50:30.35870	TRIP	Tripadvisor Names Best Beaches in the World for Travelers' Choice ... favorite beaches of the year, providing the
2023-08-02 17:50:20.31224	AMZN	Amazon Plans to Invest \$1 Billion in Movies for Theaters - Bloomberg in particular has aggravated cinema chair
2023-08-02 17:50:10.35673		Renewable Energy Investments Shift to Developing Nations ... Renewable energy investments are shifting to de
2023-08-02 17:50:00.34514	CITES	Big Cats Face Poachers, Safari Hunters, Coming Extinction ... Beverly Joubert: It's a 95 to 97 percent decline. Lior
2023-08-02 17:49:50.67943	DIS	Cable Fights For Its Movie Rights - Bloomberg Just as important, as cable has consolidated, the industry is able
2023-08-02 17:49:40.34696	CATS	Cats & Dogs SA - Company Profile and News - Bloomberg Markets
2023-08-02 17:49:30.32330	AAPL	Has the Influence of Big Tech Made Video Games Vulnerable to a ... There's a common narrative that the video
2023-08-02 17:49:20.33050	BI	BI Analyst Briefing: The Future of Video Games Bloomberg ... The video game industry has seen heightened in
2023-08-02 17:49:10.33209	NINTENDO	Nintendo and Sony Disagree About Games Industry Slump ... A shelf of Nintendo video games and accessories
2023-08-02 17:49:00.36326	AAPL	Apple (AAPL) Targets Sept. 7 for iPhone 14 Launch in Flurry of ...Aug 17, 2022 ... New products are expected to i
2023-08-02 17:48:50.36685	COVD	Covid Is Delaying All the Video Games - Bloomberg If the video game you've been looking forward to playing t
2023-08-02 17:48:40.35557	MLLY	Marley Spoon: Appendix 4C – Q4 2021 & Business Activity Report ... our meal kits contain step-by-step recipes
2023-08-02 17:48:30.45044	XMEX	Mexico's President Defends His Covid Czar Over Beach Getaway ... reeling off a list of his qualifications in respo
2023-08-02 17:48:20.41498	EDEN	EDENRED S.A.: 2017 FOOD SURVEY: ONE OUT OF TWO ... in offering healthy and balanced meals, 87% of Frenc
2023-08-02 17:48:10.98480	XLNX	An NBA Star Thinks He Can Help Video Gaming Competitions Grow ... Video game sports are on the cusp of gc
2023-08-02 17:48:00.79099		Post-Pandemic Vacations Will Blend Work with More Family Time ... Work Moves to the Beach as 'Bleisure' Time
2023-08-02 17:47:50.33913	AMZN	Jeff Bezos Sees 'Millions' of People Living, Working in Space ... Amazon.com Inc. Chief Executive Officer Jeff Bez
2023-08-02 17:47:40.55608	SEC	Kim Kardashian's SEC Settlement: Fresh Warning on Celebrity ... Kardashian SEC Slap Is Fresh Warning Shot Ove
2023-08-02 17:47:30.32287	Xbox	Watch Are Video Games Really Getting Cheaper? - Bloomberg Have video games lost their recession-proof arr
2023-08-02 17:47:20.34372		2016 Was a Record Year for Data Breaches - BloombergJan 19, 2017 ... U.S. companies and government agende
2023-08-02 17:47:11.20653	AAPL	Video Games Are Accidental Incubators of Future Tech. Up Next ... Video Games Are the Accidental Incubators i
2023-08-02 17:47:00.32136	SNE	Jason Schreier - Bloomberg relates to 'Last of Us' Multiplayer Video Game Faces Setbacks at Sony.
2023-08-02 17:46:50.36313		Renewable Energy Is So Cheap Fossil Fuels Used in Electricity May ... The exponential growth of renewable ener
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sym	title
AAPL	Heading: Apple Lineup Reaching Sales Ceiling Puts Pressure on Cook ... the company's first new products since 2010 to revive growth
AMC	Heading: Coherus Highlights Anticipated New Product Launches and Immuno ... Commercial Update: Preparing to launch as many as
AAPL	Heading: When Will Apple (AAPL) Release New iPhone SE 5G and iPad Air ... Also: The company takes another hit to its App Store bus
AAPL	Heading: Apple Pushes Back Mixed-Reality Headset Debut Two Months to ... It's meant to be a centerpiece of Apple's new product lin
SNOA	Heading: Sonoma Pharmaceuticals Announces Expanded Dental Care Line ... The company's products reduce infections, itch, pain, sca
AAPL	Heading: What's Coming at Apple's (AAPL) Sept. 7 Far Out iPhone 14 Event ... Apple Inc. made it official this past week: The company'

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KX DASHBOARDS

time	sym	title
2023-08-02 17:51:10.35224		Maoyan Partners with iQIYI, Weibo to Release 2020 Mid-Year China ... Maoyan Partners with iQIYI, Weibo to Rel
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2023-08-02 17:50:50.434	NewsRecord	
2023-08-02 17:50:40.367	Element	Value
2023-08-02 17:50:30.358	PublishTime	2023-08-02 17:50:40.367747000
2023-08-02 17:50:20.312	MarketTicker	UBER
2023-08-02 17:50:10.356	Alert	CompanyDataBreach
2023-08-02 17:50:00.345		
2023-08-02 17:49:50.679	News Content	
2023-08-02 17:49:40.346		
2023-08-02 17:49:30.323	Uber Hack: Company Blames Notorious Extortion Gang Lapsus\$ for ...Sep 19, 2022 ... Uber Technologies Inc. said the hacker responsible for a data breach reported last week is affiliated with a notorious extortion group named ...	
2023-08-02 17:49:20.330		
2023-08-02 17:49:10.332		
2023-08-02 17:49:00.363		
2023-08-02 17:48:50.366	Generative AI Insight	
2023-08-02 17:48:40.355		
2023-08-02 17:48:30.450	Uber Technologies Inc. has been hit with a data breach, with the company blaming a notorious extortion gang Lapsus\$ for the attack. This news event has caused a significant shift in the view of the company, as the breach has exposed the company's lack of security measures and could lead to a loss of customer trust. The risk and market impact of this news event could be significant, as the company's reputation could be damaged and customers may be less likely to use the service.	
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2023-08-02 17:47:30.322		
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2023-08-02 17:47:11.206		
2023-08-02 17:47:00.321	Create Newsletter	
2023-08-02 17:46:50.363		
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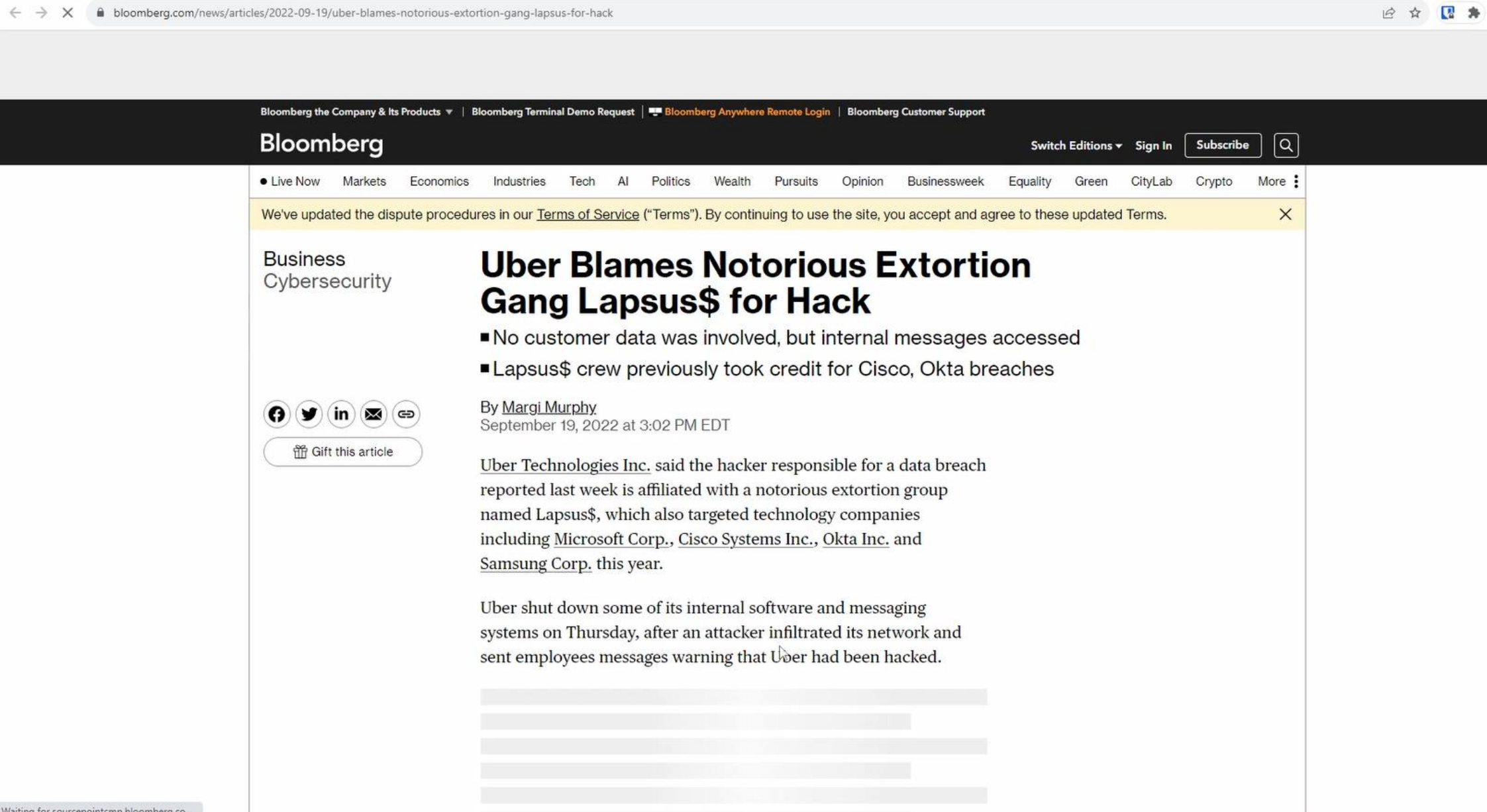
Source: <https://www.bloomberg.com/news/articles/2022-09-19/uber-blames-notorious-extortion-gang-lapsus-for-hack>

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2023-08-02 17:50:50.434	Newsletter	
2023-08-02 17:50:40.367	<div>Dear Valued Customer, We are writing to inform you of a recent news article by Bloomberg regarding a data breach at Uber Technologies Inc. According to the article, the hacker responsible for the breach is affiliated with a notorious extortion group named Lapsus\$. This news could have a significant impact on the company's stock price and market performance. It is possible that investors may become wary of the company's security protocols and may be less likely to invest in the company. Additionally, the company may face legal action from customers whose data was compromised, which could lead to further financial losses. We recommend that customers who have Uber Technologies Inc. on their watchlist closely monitor the company's stock price and market performance in the coming days. It is important to be aware of the potential risks and market impacts associated with this news. If you have any questions or concerns, please do not hesitate to contact us. Sincerely, Your Financial Insight Team</div>	
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2023-08-02 17:50:10.356		
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AIRM

AIR MILES® provides Canadians with more options to book their ... "With thousands of Package Vacations avail

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UBER

Uber Hack: Company Blames Notorious Extortion Gang Lapsus\$ for ...Sep 19, 2022 ... Uber Technologies Inc. sai

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TRIP

Tripadvisor Names Best Beaches in the World for Travelers' Choice ... favorite beaches of the year, providing the

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AMZN

Amazon Plans to Invest \$1 Billion in Movies for Theaters - Bloomberg in particular has aggravated cinema chair

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Renewable Energy Investments Shift to Developing Nations ... Renewable energy investments are shifting to de

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CITES

Big Cats Face Poachers, Safari Hunters, Coming Extinction ... Beverly Joubert: It's a 95 to 97 percent decline. Lior

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Apple (AAPL) Targets Sept. 7 for iPhone 14 Launch in Flurry of ...Aug 17, 2022 ... New products are expected to i

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COVID

Covid Is Delaying All the Video Games - Bloomberg If the video game you've been looking forward to playing t

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Jeff Bezos Sees 'Millions' of People Living, Working in Space ... Amazon.com Inc. Chief Executive Officer Jeff Bez

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SEC

Kim Kardashian's SEC Settlement: Fresh Warning on Celebrity ... Kardashian SEC Slap Is Fresh Warning Shot Ove

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Xbox

Watch Are Video Games Really Getting Cheaper? - Bloomberg Have video games lost their recession-proof arm

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JPM

Heading: JPMorgan's Data Breach Reveals Growth Market for Insurers ... Demand for coverage has accelerated after some of the large

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UBER

Heading: Uber's Former Security Chief Convicted of Data Hack Coverup ... Joe Sullivan, the former head of security at Uber, leaves cou

UBER

Heading: Uber Sued for Negligence After Disclosing Massive Data Breach ... Company accused of failing to take reasonable security st

EFX

Heading: Equifax Suffered a Hack Almost Five Months Earlier Than the Date It ... In a statement, the company said the March breach v

INI

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2023-08-02 17:46:40.32824	OOZI	OOZI Cats or OZI Katz: From Fugitive to Tech CEO and Back Again ... As the boss of a successful, if obscure, tech

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Company: EFX

Heading: Equifax Suffered a Hack Almost Five Months Earlier Than the Date It ... In a statement, the company said the March breach was not related to Equifax hired the security firm Mandiant on both occasions and may ...

Original Description: Equifax Inc. learned about a major breach of its computer systems in March -- almost five months before the date it has publicly disclosed, according to three people familiar with the situation.

Trade Price

140.00

130.00

120.00

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100.00

108.70

2017-08-22

2017-10-11

2017-11-03

2017-11-30

2018-01-19

2018-03-10

Date

EFX

News Article

2017-11-03

EFX

108.70

Source: <https://www.bloomberg.com/news/articles/2017-09-18/equifax-is-said-to-suffer-a-hack-earlier-than-the-date-disclosed>

TSLA

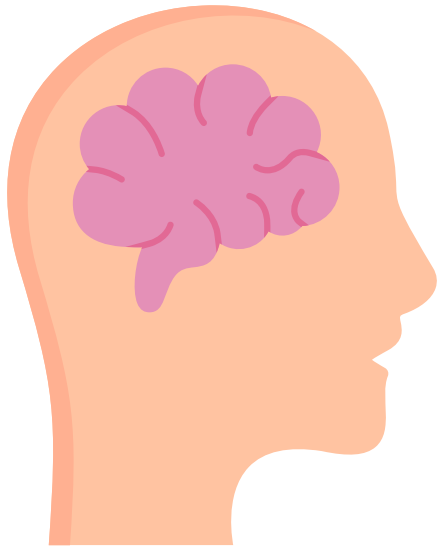
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KX is the **Contextual** Data Platform for AI so Enterprises Can Work Smarter, Not Harder

A Neuroscience Approach to AI



1. Discover

- Enterprise connectors
- Real-time data synch
- Stream processing



2. Encode

- Vector embeddings
- Vector indices



3. Search

- Distance metrics
- Metadata & partitioning
- Query & filter



4. Contextualize

- Classification
- Relevancy
- Seasonality
- Versioning
- Interpolation
- Real time & historical



5. Reason

- Computation
- Aggregations



6. Anticipate

- Anomaly detection
- Forecasting



7. Act

(Integrations)

- LLMs
- Generators
- Chat
- Automation



8. Share

- Metadata filtering
- Role-based access

About KX: Trusted by Wall Street, surging on main street. A growing ecosystem & strategic partners.

Customers



Morgan Stanley



Partners



The time series, vector
and matrix data
management pioneer.



Trillions trusted and
under management in
top-tier banks and
hedge funds.



Cloud native, Python
Native AI Contextual
Intelligence

