Unlocking Customer Insights Trapped in Customer Conversations

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A lesson on listening to customers

“We want a faster browser….”

“We want a more responsive touchscreen….”

”We want more diverse applications…..”

Source: How BlackBerry blew it: The inside story, Globe and Mail, The Globe and Mail , 2013

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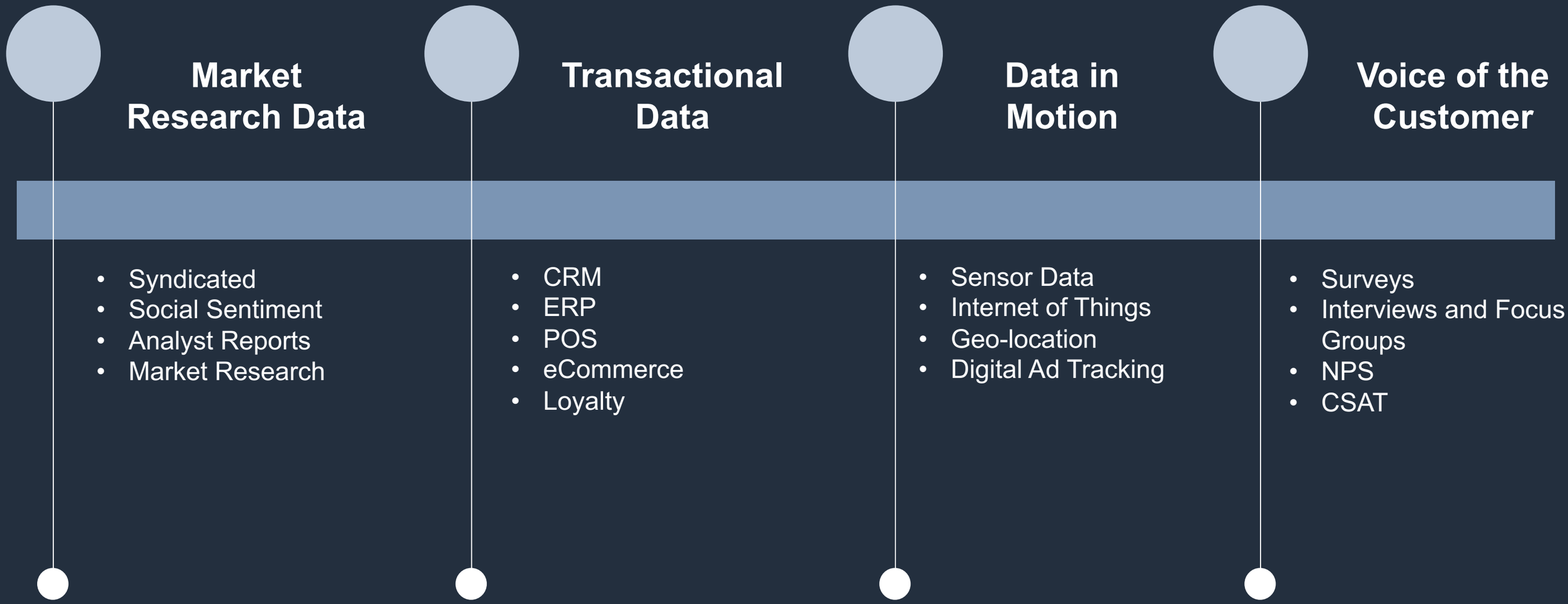
How do organizations listen to customers?



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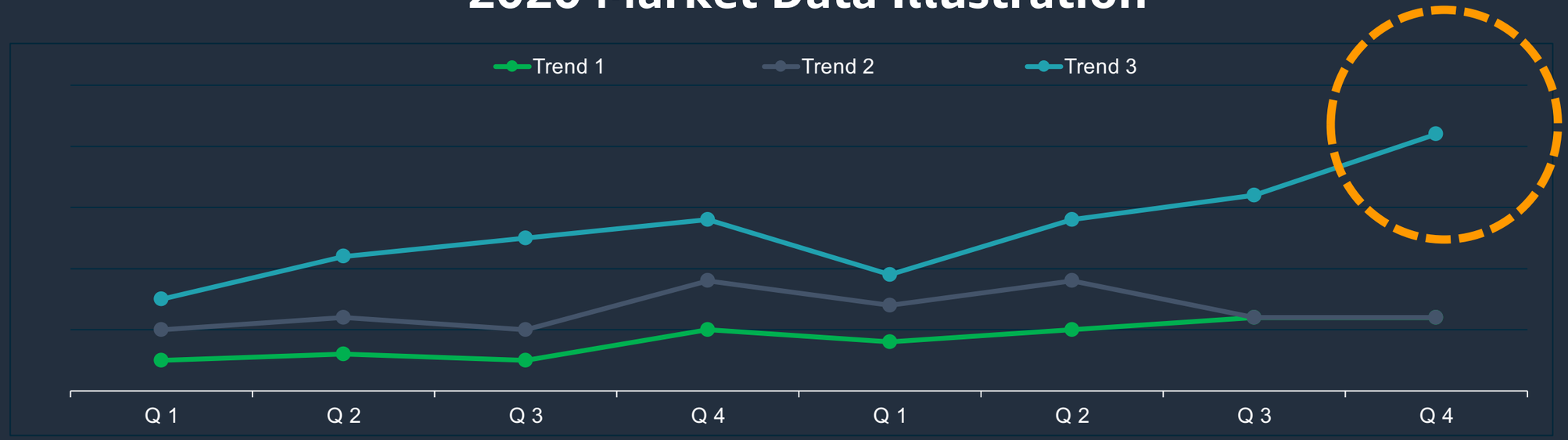
Everyone’s Using the Same Data to Make Decisions

2020 Market Data Illustration



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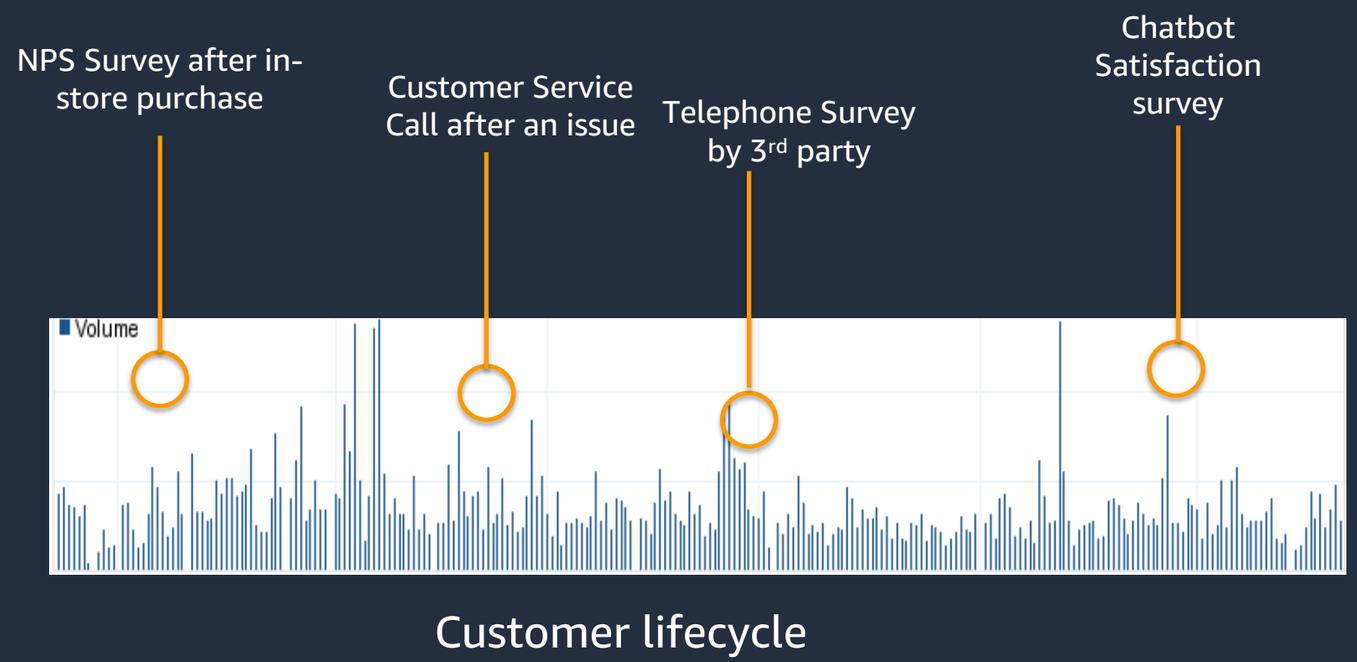
Survey Data May Not Capture the Holistic Customer Experience



Consumers are increasingly experiencing "survey fatigue," with research showing declining response rates for each subsequent survey that a customer receives."

Gartner, 2020

" Growing Companies Are More Actively Collecting CX Data Than Nongrowth Companies"

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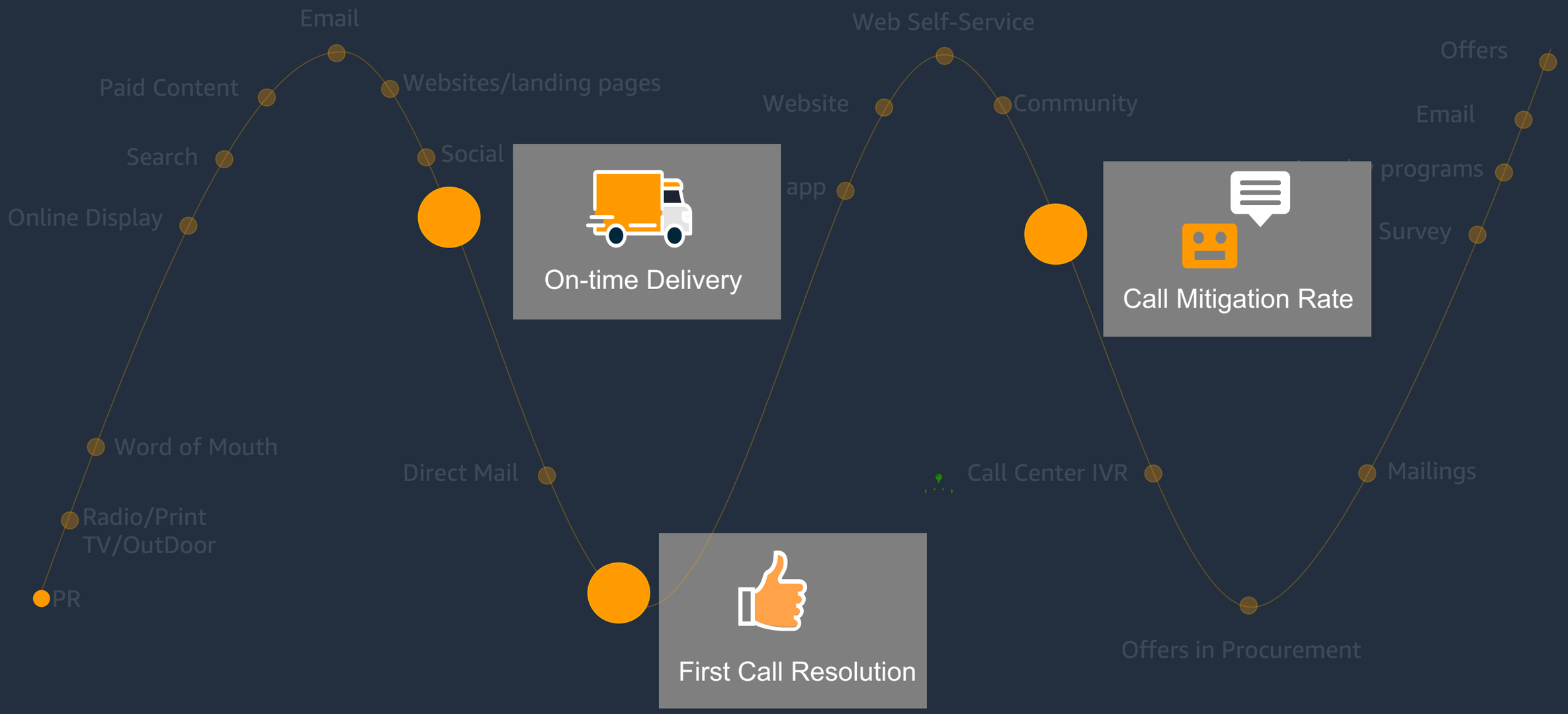
Customer Experience is Often Measured in Silos



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Unlocking Customer Conversations

Market Research Data

- Syndicated
- Social Sentiment
- Analyst Reports
- Market Research

Transactional Data

- CRM
- ERP
- POS
- eCommerce
- Loyalty

Data in Motion

- Sensor Data
- Internet of Things
- Geo-location
- Cookie and Pixel Tracking
- Digital Ad Tracking
- Social Network Activity

Voice of the Customer

- Surveys
- Focus Groups
- NPS
- CSAT

- Call Transcripts
- Messenger Exchanges
- Chatbot Transcripts
- Social Media Comments

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What makes Customer Conversations Unique

- Cannot be displayed in rows, columns and relational databases
- Images, audio, video, word processing files, emails, spreadsheets
- Estimated to be 93% of of enterprise data by end of 2020 (Gartner)
- More difficult to manage and protect with legacy solutions

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Customer Conversations: Capture Data on All of Your Channels

Experience in Other Channels

Failover Channel

Channel Expectations

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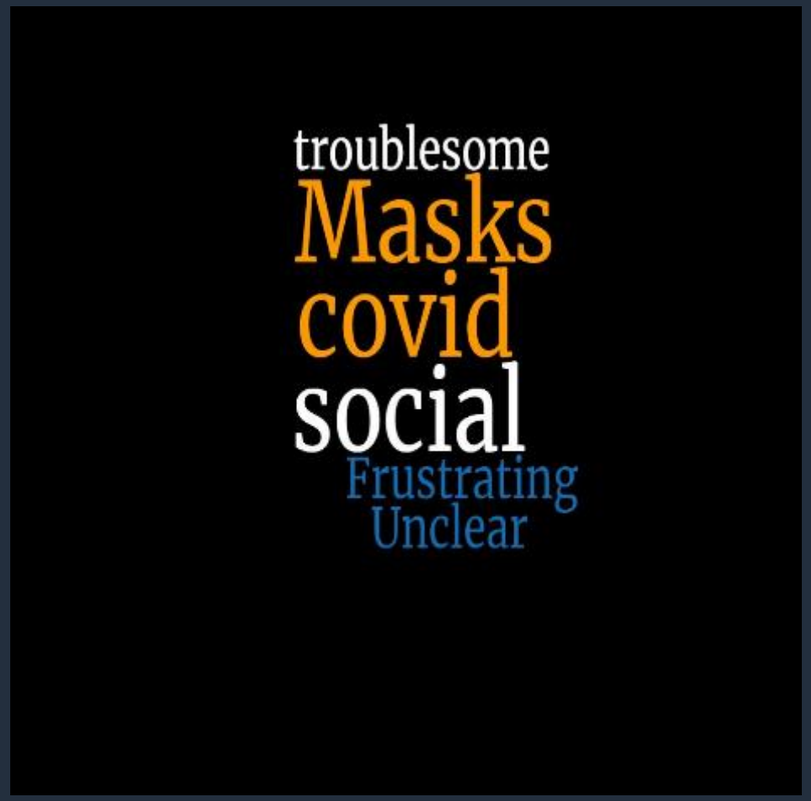
Customer Conversations: Reveal Trending Topics

None Trending	Trending	
January	February	March



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Customer Conversations: Automate the QA of Support Team

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Demo

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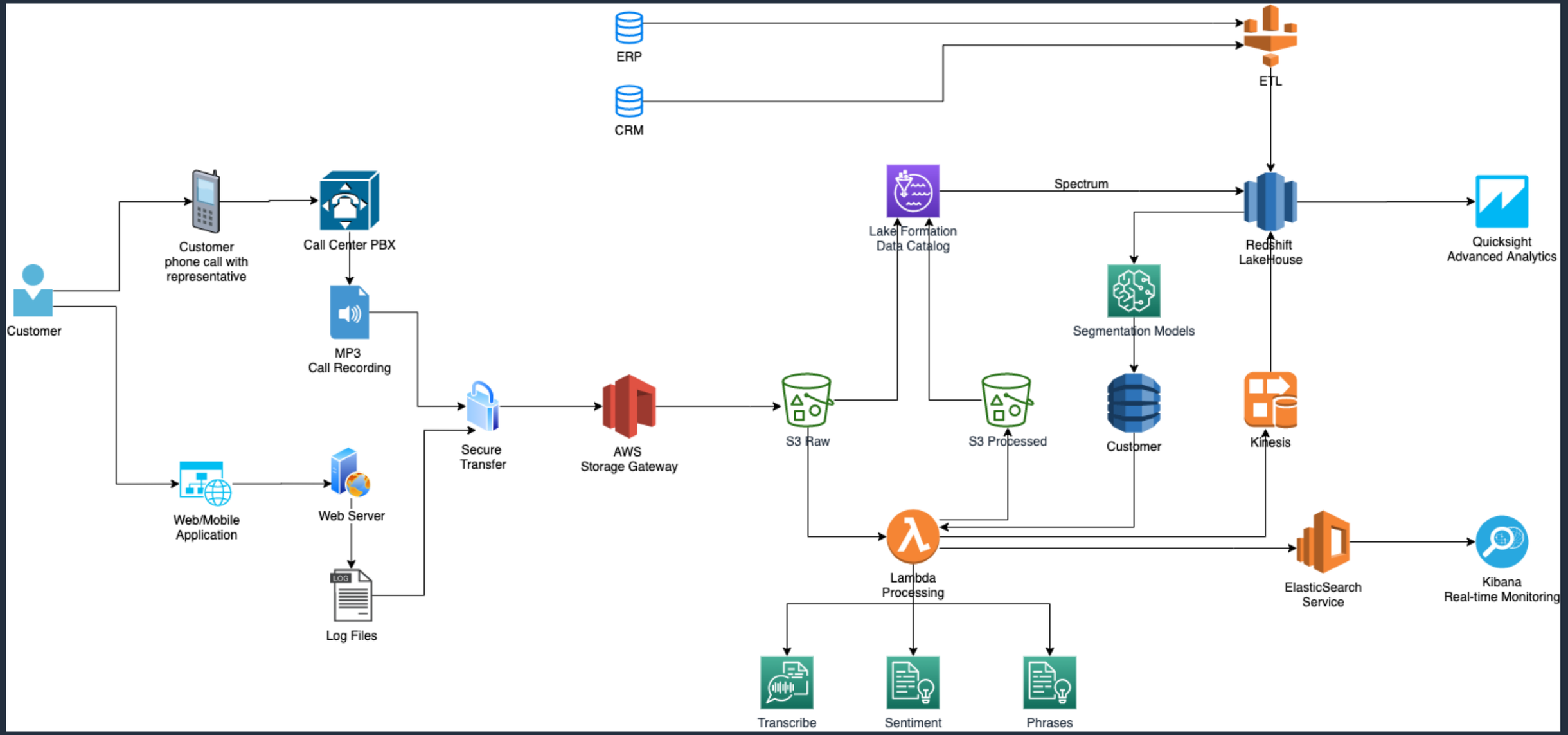
Architecture



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inslake-sentiment

Audio files are streamed into an S3 bucket.

Overview

Type a prefix and press Enter to search. Press ESC to clear.

Upload | + Create folder | Download | Actions

US East (N. Virginia)

Viewing 1 to 300

Name	Last modified	Size	Storage class
978-0-00-733934-1.mp3	Oct 5, 2020 11:41:03 AM GMT-0400	46.9 KB	Standard
978-0-00-757062-1.mp3	Oct 5, 2020 11:42:42 AM GMT-0400	25.1 KB	Standard
978-0-00-812128-0.mp3	Oct 5, 2020 8:30:08 AM GMT-0400	35.6 KB	Standard
978-0-01-148469-3.mp3	Oct 5, 2020 11:43:20 AM GMT-0400	35.2 KB	Standard
978-0-01-361601-6.mp3	Oct 5, 2020 11:47:00 AM GMT-0400	8.9 KB	Standard
978-0-01-505071-9.mp3	Oct 5, 2020 11:47:02 AM GMT-0400	19.0 KB	Standard
978-0-01-594978-5.mp3	Oct 5, 2020 10:51:16 AM GMT-0400	40.3 KB	Standard
978-0-01-784748-5.mp3	Oct 5, 2020 8:37:14 AM GMT-0400	49.0 KB	Standard
978-0-02-189467-3.mp3	Oct 5, 2020 8:30:42 AM GMT-0400	14.7 KB	Standard
978-0-02-273577-7.mp3	Oct 5, 2020 10:50:17 AM GMT-0400	13.4 KB	Standard

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Processing

A lambda function is triggered, processing each audio file in real time.

Deep learning automatic speech recognition (ASR) to convert speech to text quickly and accurately

Transcribe

Natural language processing (NLP) service that uses machine learning to find insights and relationships in text.

Comprehend

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Output

Kinesis

Provides a simple way to capture, transform, and load streaming data. Capture and load data in near real time.

Redshift

Bring together structured data from your data warehouse and semi-structured data such as application logs from your S3 data lake to get real-time operational insights on your applications and systems.

Elasticsearch

Fully managed service that makes it easy to deploy, operate, and scale Elasticsearch for real-time analytics, full text search, and application monitoring.

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Consumption

Kibana

Data visualization dashboard for Elasticsearch.

QuickSight

Create and publish interactive dashboards that include ML Insights.

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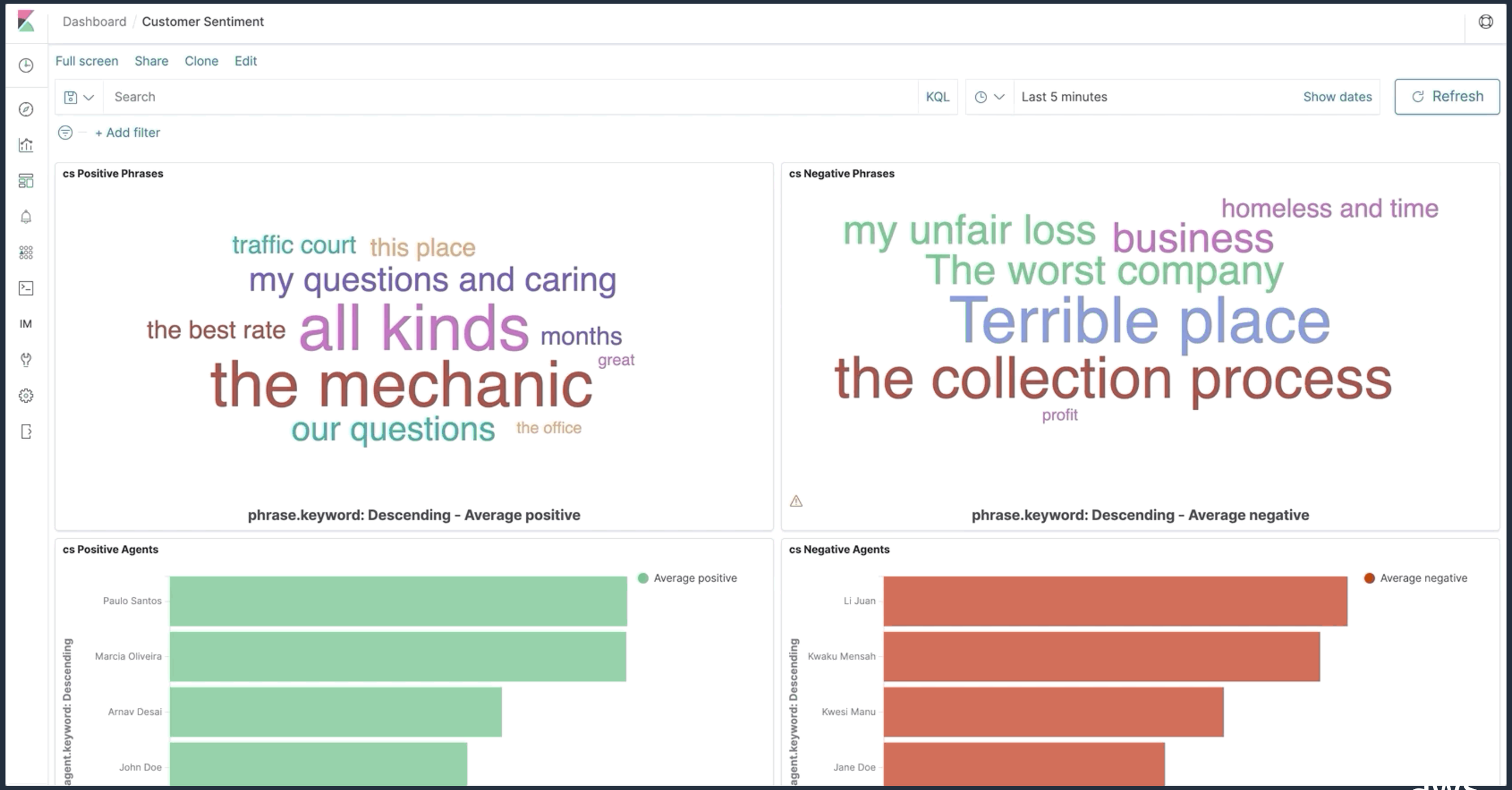

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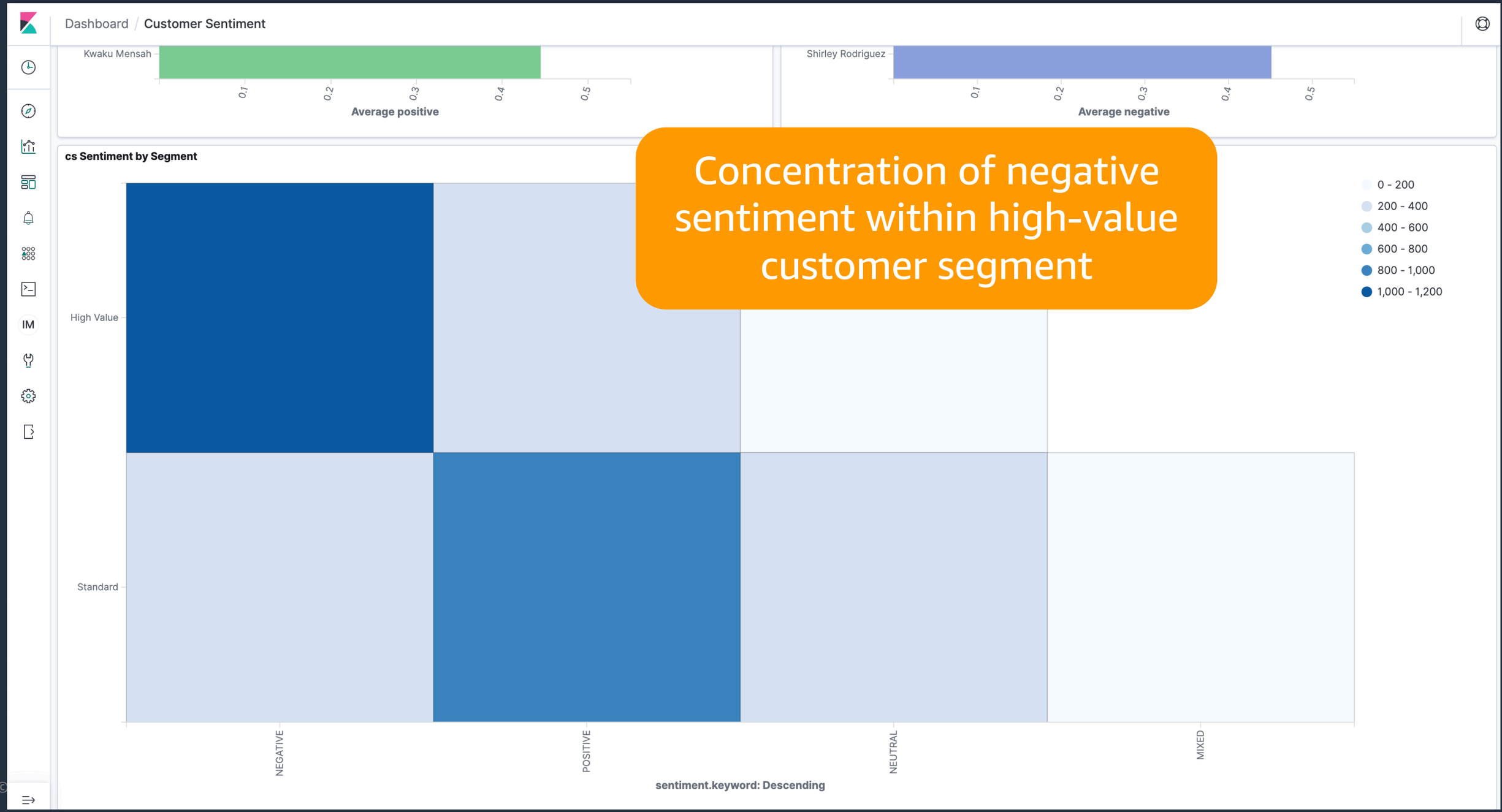
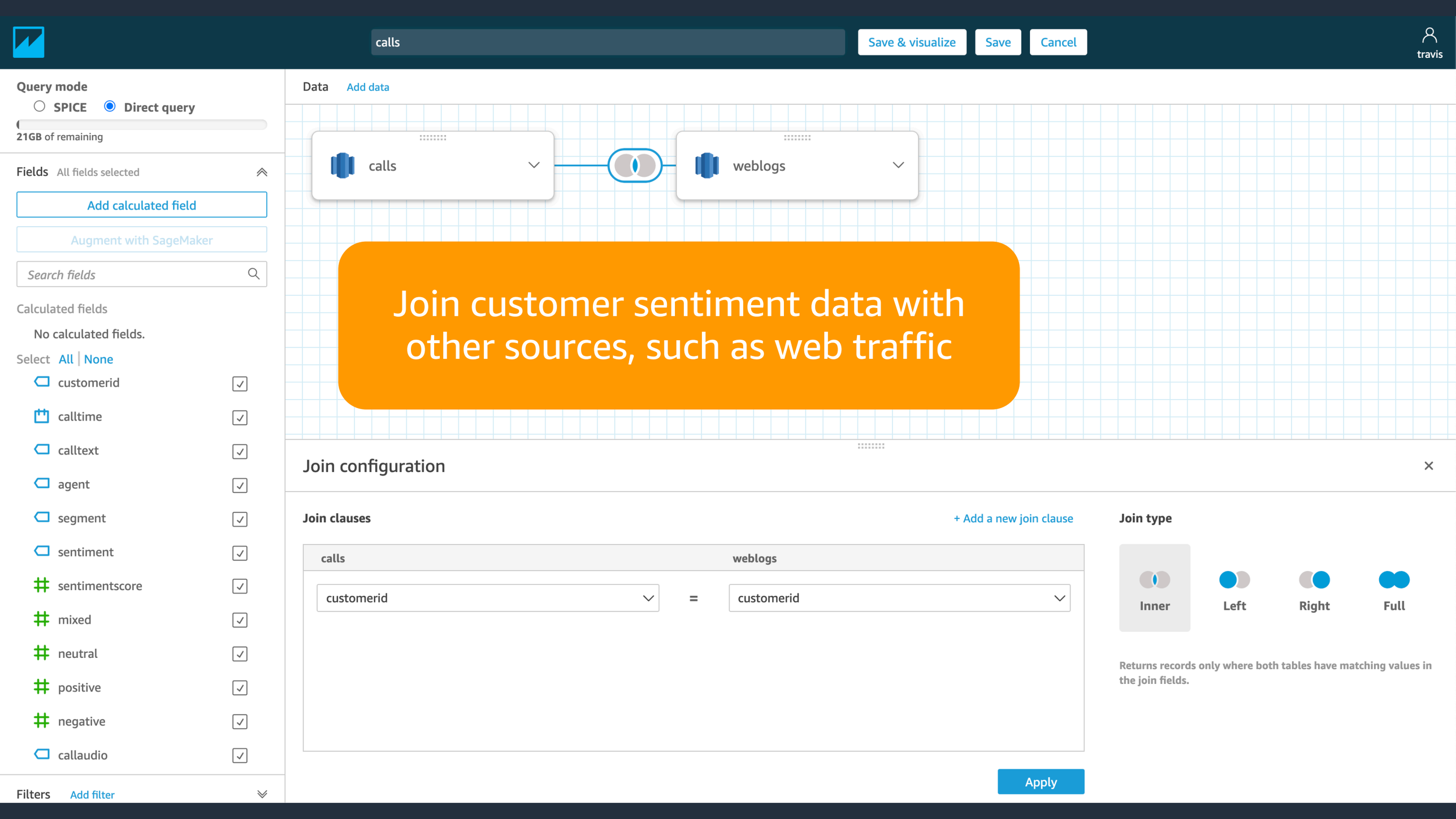
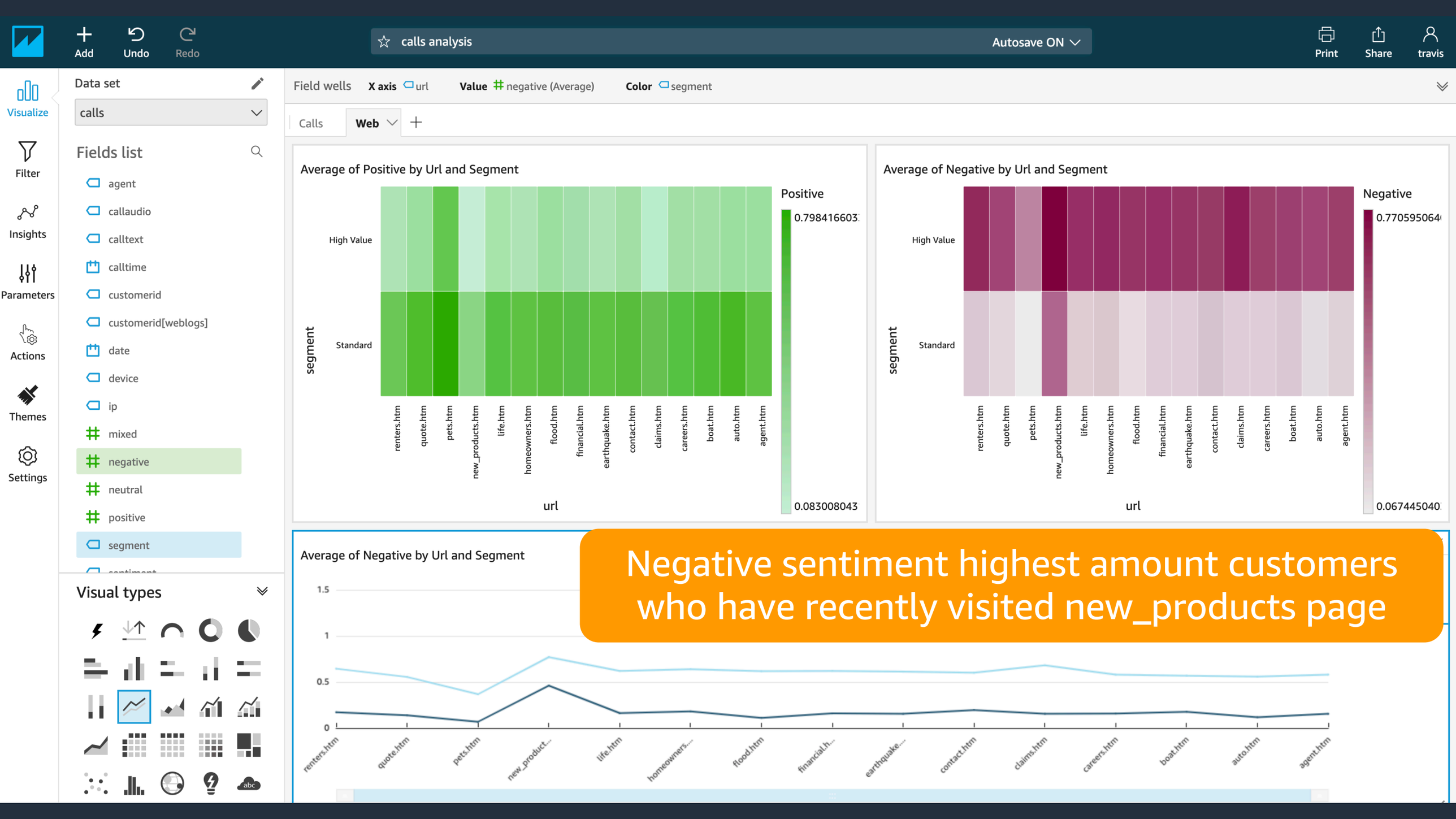

Dashboard / Customer Sentiment
Kwaku Mensah
0.1
0.2
0.3
0.4
0.5
Average positive
Shirley Rodriguez
0.1
0.2
0.3
0.4
0.5
Average negative
cs Sentiment by Segment
Concentration of negative sentiment within high-value customer segment
0 - 200
200 - 400
400 - 600
600 - 800
800 - 1,000
1,000 - 1,200
High Value
Standard
NEGATIVE
POSITIVE
NEUTRAL
MIXED
sentiment.keyword: Descending


calls
Save & visualize
Save
Cancel
travis
Query mode
SPICE
Direct query
21GB of remaining
Fields All fields selected
Add calculated field
Augment with SageMaker
Search fields
Calculated fields
No calculated fields.
Select All | None
customerid
calltime
calltext
agent
segment
sentiment
sentimentscore
mixed
neutral
positive
negative
callaudio
Filters Add filter
Data Add data
calls
weblogs
Join customer sentiment data with other sources, such as web traffic
Join configuration
Join clauses
+ Add a new join clause
calls
weblogs
customerid
=
customerid
Apply
Join type
Inner
Left
Right
Full
Returns records only where both tables have matching values in the join fields.


Add
Undo
Redo
calls analysis
Autosave ON
Print
Share
travis
Visualize
Filter
Insights
Parameters
Actions
Themes
Settings
Data set
calls
Fields list
agent
callaudio
calltext
calltime
customerid
customerid[weblogs]
date
device
ip
mixed
negative
neutral
positive
segment
Visual types
Field wells
X axis url
Value negative (Average)
Color segment
Calls
Web
Average of Positive by Url and Segment
High Value
Standard
segment
renters.htm
quote.htm
pets.htm
new_products.htm
life.htm
homeowners.htm
flood.htm
financial.htm
earthquake.htm
contact.htm
claims.htm
careers.htm
boat.htm
auto.htm
agent.htm
url
Positive
0.798416603
0.083008043
Average of Negative by Url and Segment
Negative
0.770595064
0.067445040
Average of Negative by Url and Segment
1.5
1
0.5
0
Negative sentiment highest amount customers who have recently visited new_products page

Thank You

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