

Amazon Comprehend: The AWS Text Analytics Workload

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Pop-up Loft

AWS ML Stack



APPLICATION SERVICES

Rekognition

Transcribe

Translate

Polly

Comprehend

Lex

PLATFORM SERVICES

Amazon SageMaker

AWS DeepLens

FRAMEWORKS & INTERFACES

AWS Deep Learning AMIs

Caffe2

CNTK

Apache
MXNet

PyTorch

TensorFlow

Torch

Keras

Gluon

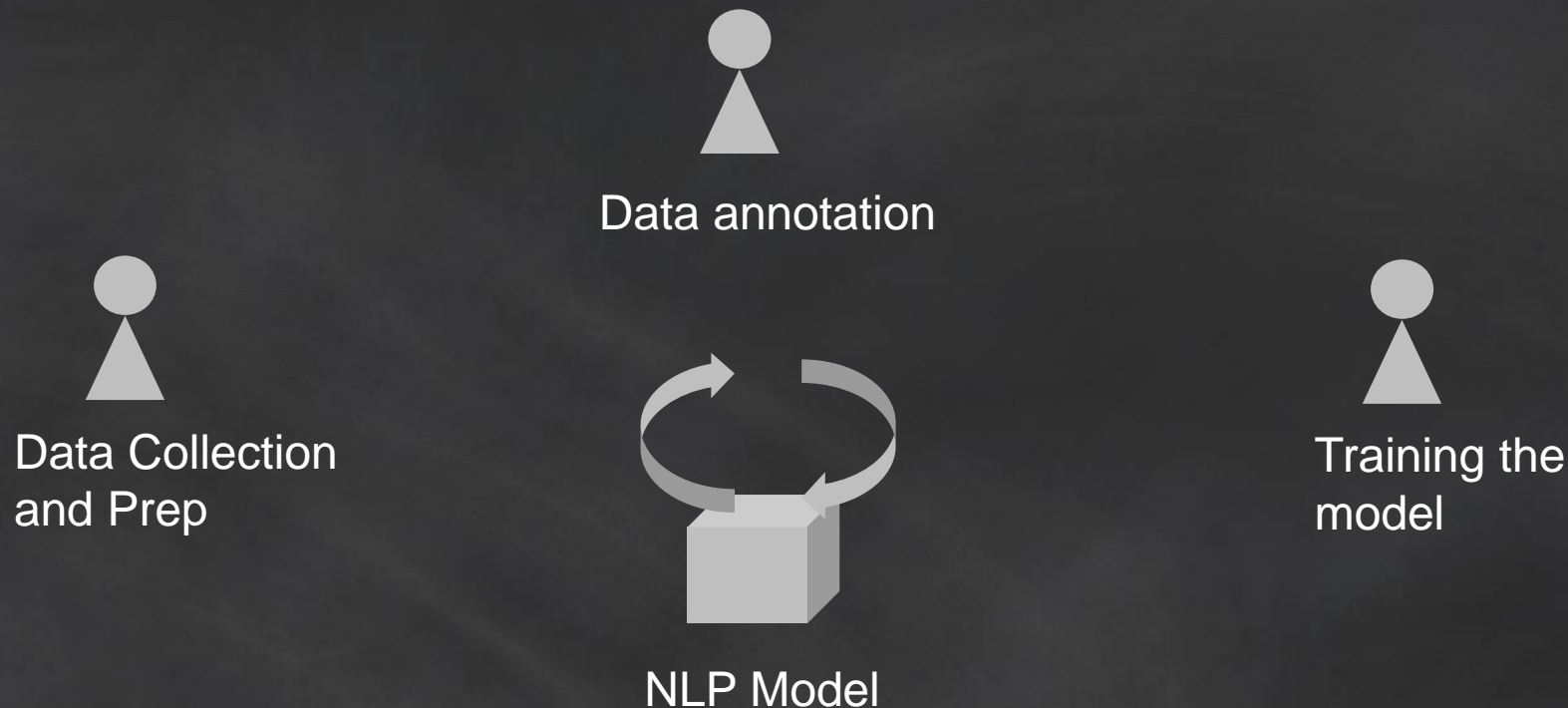
Natural Language Data

- News Media
 - Brand trends, correlating events
- Customer engagement
 - Call center, issue triage, social media analytics
- Records and research
 - Actionable document-centric processes, understand patterns

Text Analytics on AWS

- AWS Platform
- Amazon S3 Data Lake
- Solution integration
- Amazon Data

Training NLP is Hard and Expensive



Amazon Comprehend: Natural Language Processing



Sentiment



Entities



Languages

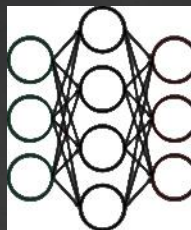


Key phrases



Topic modeling

POWERED BY DEEP
LEARNING



Text Analysis

Amazon.com, Inc. is located in Seattle, WA and was founded July 5th, 1994 by Jeff Bezos. Our customers love buying everything from books to blenders at great prices.

Named Entities

- Amazon.com: Organization
- Seattle, WA : Location
- July 5th, 1994: Date
- Jeff Bezos : Person

Keyphrases

- Our customers
- books
- blenders
- great prices

Sentiment

- Positive

Language

- English

Topic Modeling

Keywords Topic Groups

Topic	Term	Weight
0	Washington	.89
1	Silicon Valley	.67
2	Roasting	.91

Document Relationship to Topics

Document	Topic	Proportion
Doc.txt	0	.89
Doc.txt	1	.67
Doc.txt	2	.91

Most Common Patterns

Content Personalization: Customers are using Comprehend to analyze content and look for trends and relationships based on entities, phrases or even topic similarities. These capabilities enable content personalization and recommendation use cases.

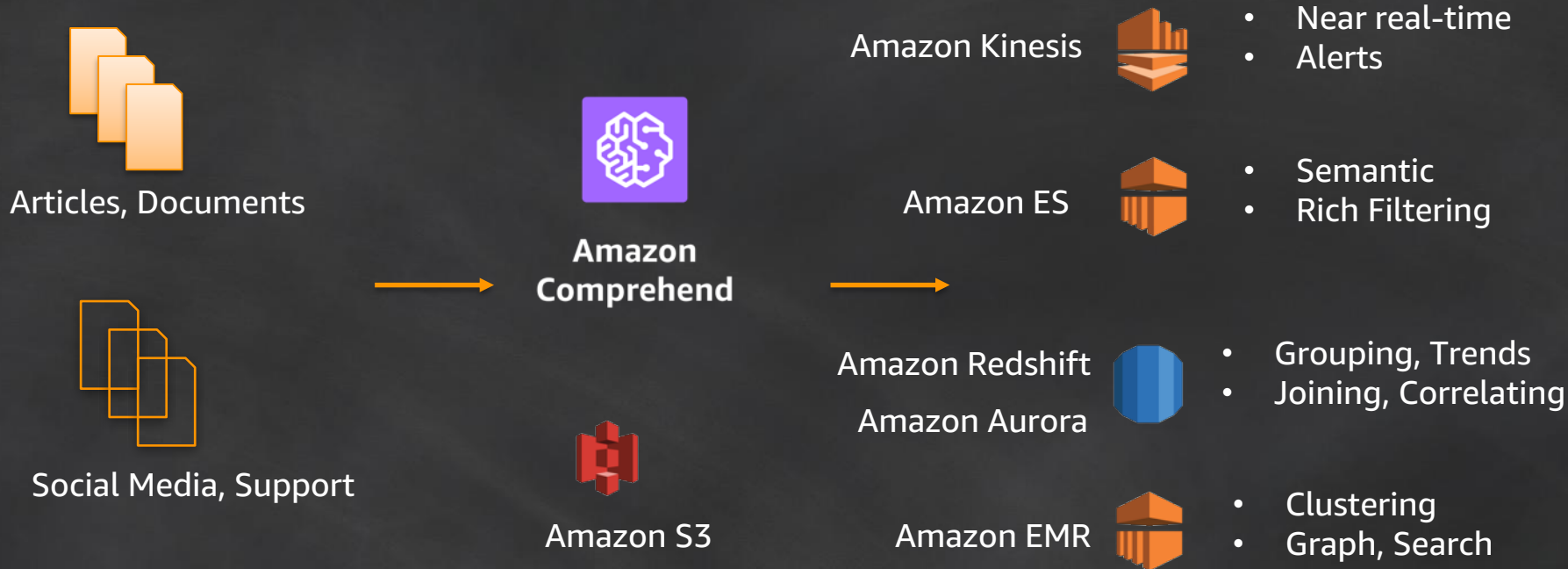
Semantic Search: Customers using Amazon Comprehend to index entities and keyphrases, boosting and ranking search results.

Intelligent data warehouse: Customers are using Amazon Comprehend to query unstructured data in relational databases, process that data with Comprehend via remote call, then insert them back into the data warehouse to join and understand trends.

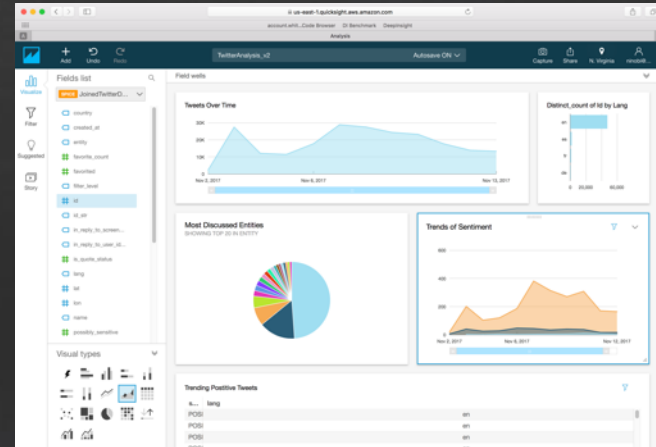
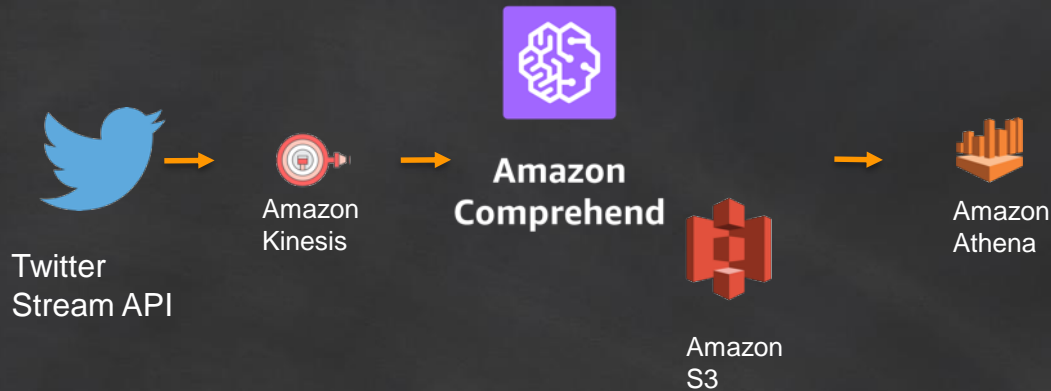
Social Analytics: Customers are using Amazon Comprehend to ingest, process and analyze feedback and comments from social media posts across Twitter and Facebook.

Information management: Customers are using Amazon Comprehend for analyzing and discovering related content for enterprise information management, topical organization and support for internal business processes like compliance.

Comprehend + AWS = Scale Text Analytics

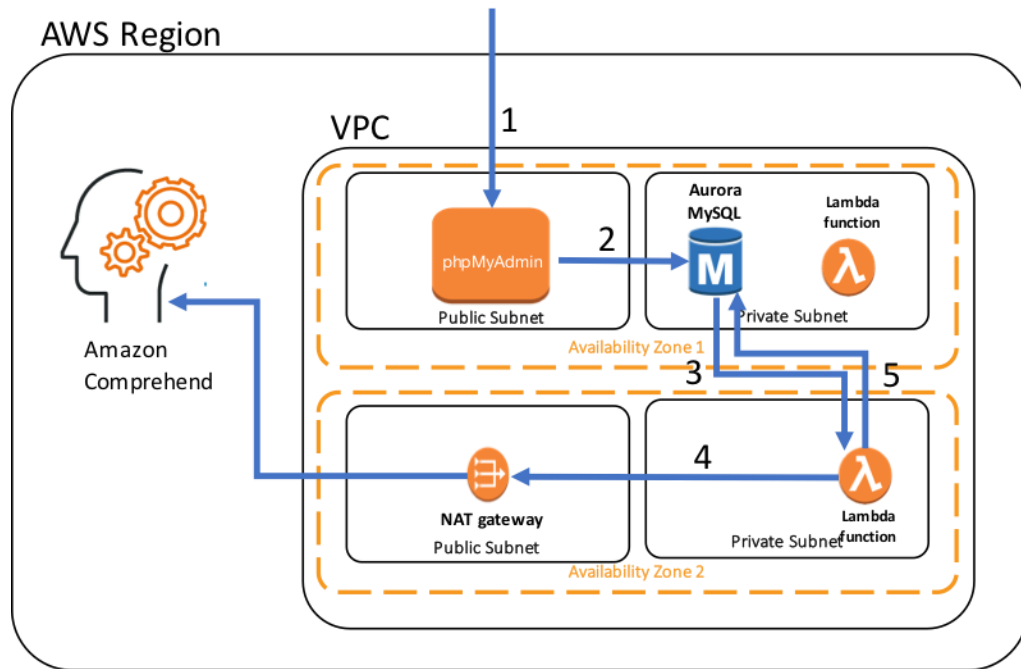


Analyze social media postings and comments to organize and classify customer feedback and look for common patterns.



Visualize results in Amazon QuickSight

Analyzing and joining unstructured text within relational databases. Customer support and social analytics all within a database.



“What do people say about... ?”