

# Discovering Hot Topics Using Machine Learning

This solution helps brand-conscious customers understand the most popular topics being actively discussed by ingesting digital assets and performing near real-time inferences and analytics. To deploy this solution using the available AWS CloudFormation template, select **Deploy with AWS**.

**1 Ingestion** — Social media and RSS feed ingestion and management using **AWS Lambda** functions, **Amazon DynamoDB**, and **Amazon CloudWatch Event Scheduler**. For detailed reference architecture diagrams for Twitter, YouTube comment, and RSS news feed ingestion, refer to the implementation guide.

**2 Data Stream** — The data is buffered through **Amazon Kinesis Data Streams** to provide resiliency and throttle incoming requests. The Data Streams have a configured DLQ to catch any errors in processing feeds.

**3 Workflow** — Consumer (Lambda function) of the Data Streams initiates an **AWS Step Functions** workflow that orchestrates Amazon Machine Learning capabilities including: **Amazon Translate**, **Amazon Comprehend**, and **Amazon Rekognition**.

**4 Integration** — The inference data integrates with the storage components through an event-driven architecture using **Amazon EventBridge**. EventBridge allows further customization to add additional targets by configuring rules.

**5 Storage and Visualization** — A combination of **Amazon Kinesis Data Firehose**, **Amazon S3** buckets, **AWS Glue** tables, **Amazon Athena**, and **Amazon QuickSight**.

