Sentiment Analysis using Azure Cognitive Services

Why Microsoft Cognitive Services ?

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Easy

Roll your own with REST APIs

Simple to add: just a few lines of code required

Flexible

Make the same API code call on iOS, Android, and Windows

Integrate into the language and platform of your choice

Tested

Built by experts in their field from Microsoft Research, Bing, and Azure Machine Learning

Quality documentation, sample code, and community support

GET A KEY   BUILD

python   node js

GitHub   msdn

uservoice   stackoverflow

A variety of real-world applications

Vision

What is in the image?

Computer Vision

Category	People; 5 faces
Adult/Racy?	False/False
Dominant colors	■ ■ ■ ■
Accent color	

Speech

Give me directions to the nearest local branch.

Bing Speech

Convert spoken audio to text

Convert text to spoken audio

Extract intent of user

Language

Play today's customer call recording.

Language Understanding

Natural Language Processing

```
Intent: PlayCall
Content: Customer#
DateTime.date: today
```

▶

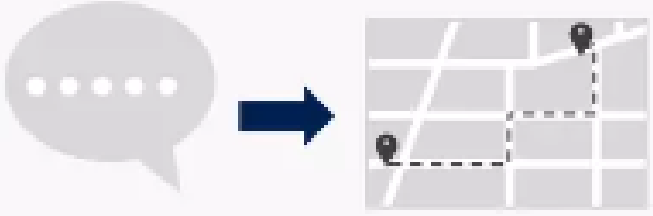Now Playing

11/29/2016 Customer Call

Knowledge

Top publications in customer lifecycle trends?

Knowledge Exploration

Here are the top results:

Customer Relationship Management – 5 Key Trends for 2014 CRM
Oct 28, 2015 – Here are FIVE key **trends** in 2014 that would help marketers in rolling ... Of late, marketers are looking at **customer lifecycle** management (CLM)

Predictive Customer Lifecycle Management (CLM)
The purpose of **Customer Life-cycle** Management (CLM) is to maximize both customer retention and ... Predictive trend analysis provides business visibility.

Trends 2016: The Future of Customer Service
Jan 5, 2016 – The top 10 **customer** service **trends** for 2016 that ... North American Consumer

Language Around Customer Lifecycles in the Banking Industry
View PDF

Search

Search for 'fraud prevention'

Bing News Search

Here is what I found:

Information Communications Media Market News
It also investigates the top three expected **Fraud** Detection and **Prevention** programs, in terms of demand in key markets...

The Big Question: In-House or Outsourced Fraud Protection?
First, let's point out that there is not one absolute answer—there are "pros" and "cons" to each. Those who favor in-house...

How to Protect Your Business from Online Fraud this Holiday Season
Michael heads fraud prevention tool. Online and mobile shopping are expected to continue growing apace...

Apps Powered by MS Cognitive Services

Cloud Community Group

I think it's a person sitting in front of a computer and he seems ☺. I am 99% sure that's **Bill Gates**

MICROSOFT

CelebsLike.Me
Which Oscar nominee do you look like?

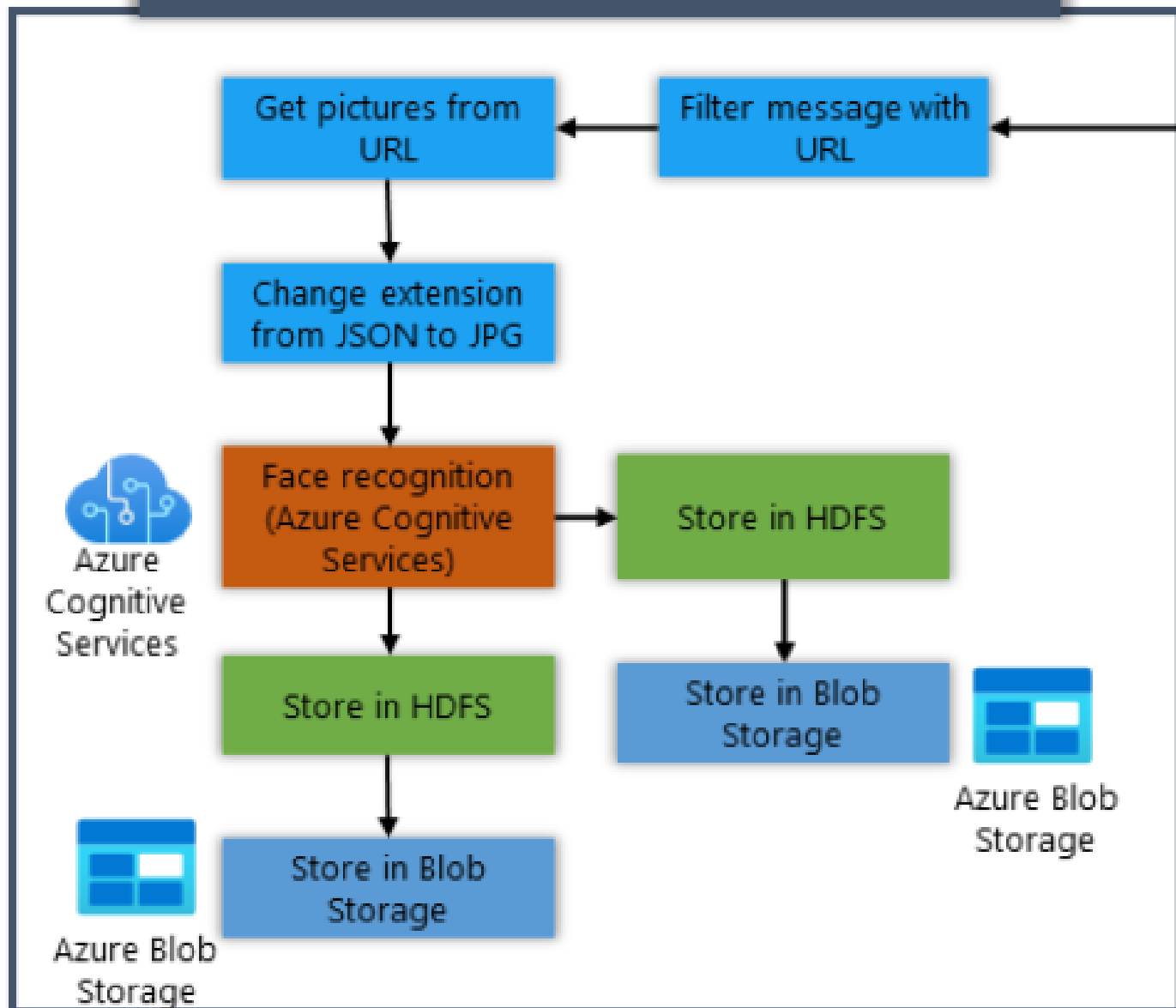Your Oscar nominee match is...

49% MATCH

Anthony Hopkins

CaptionBot.ai

Celebslike.me

ProjectMurphy.net

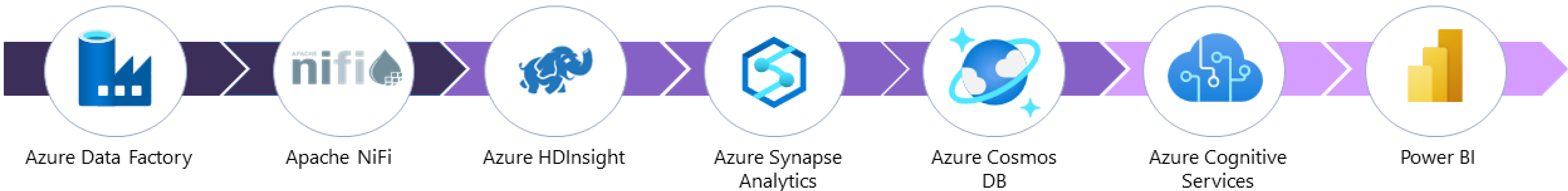# Architecture
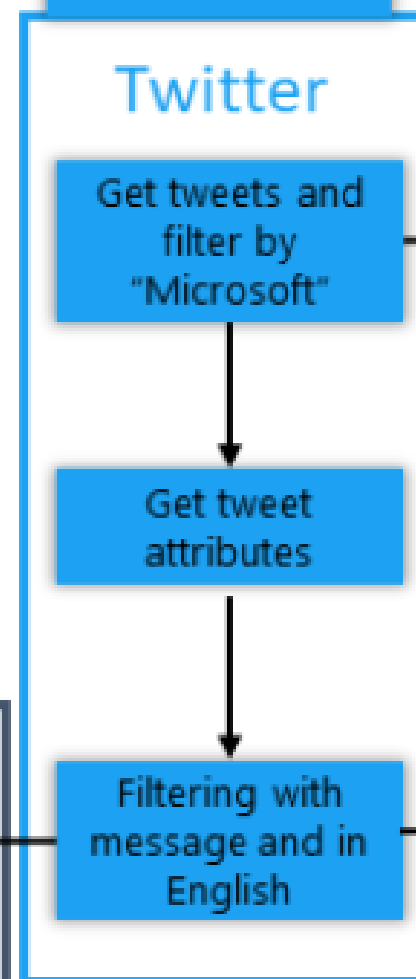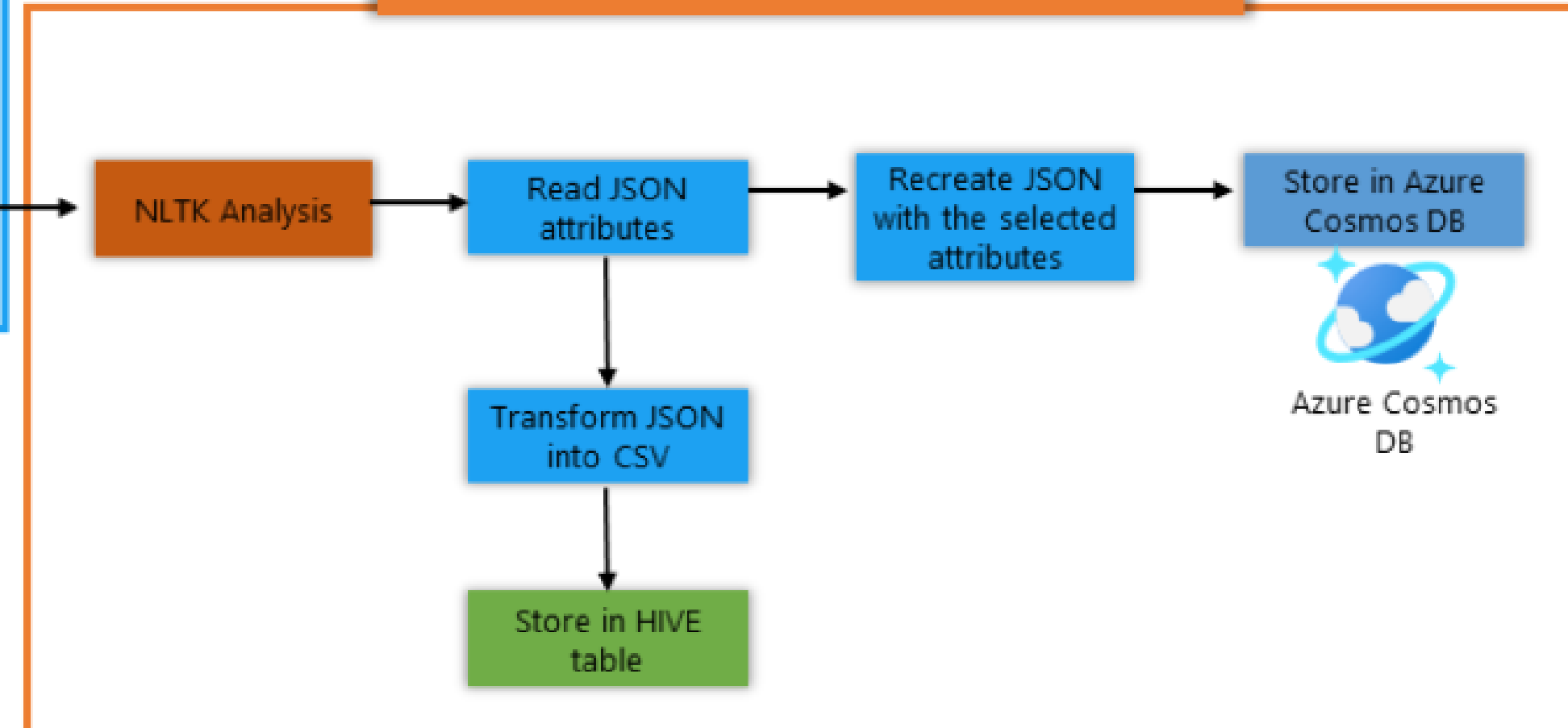
Text Analysis API

- **Detects Sentiment, Key phrases, Language**

  - Sentiment - Is the text Negative or positive?
  - Key Phrases - What people are discussing in a single article?
  - Language - What Language is text written in?

- **Run sentiment analysis**

  - A Natural Language Toolkit (NLTK) algorithm runs on the ingested messages. Sentiment analysis runs on the text in the tweets. The results are stored in CSV format in a Hive table, and the JSON data is stored in Azure Cosmos DB.

Ingestion layer   Storage layer   Processing layer

Azure Data Factory   Apache NiFi   Azure HDInsight   Azure Synapse Analytics   Azure Cosmos DB   Azure Cognitive Services   Power BI

Related resources

- **Extract, transform, and load (ETL) using HDInsight**
- **Knowledge mining for customer feedback**
- **Analyze text with the Language service**
- **Create and consume Cognitive Services**
- **Analyze news feeds with near real-time analytics**

Contributors

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