



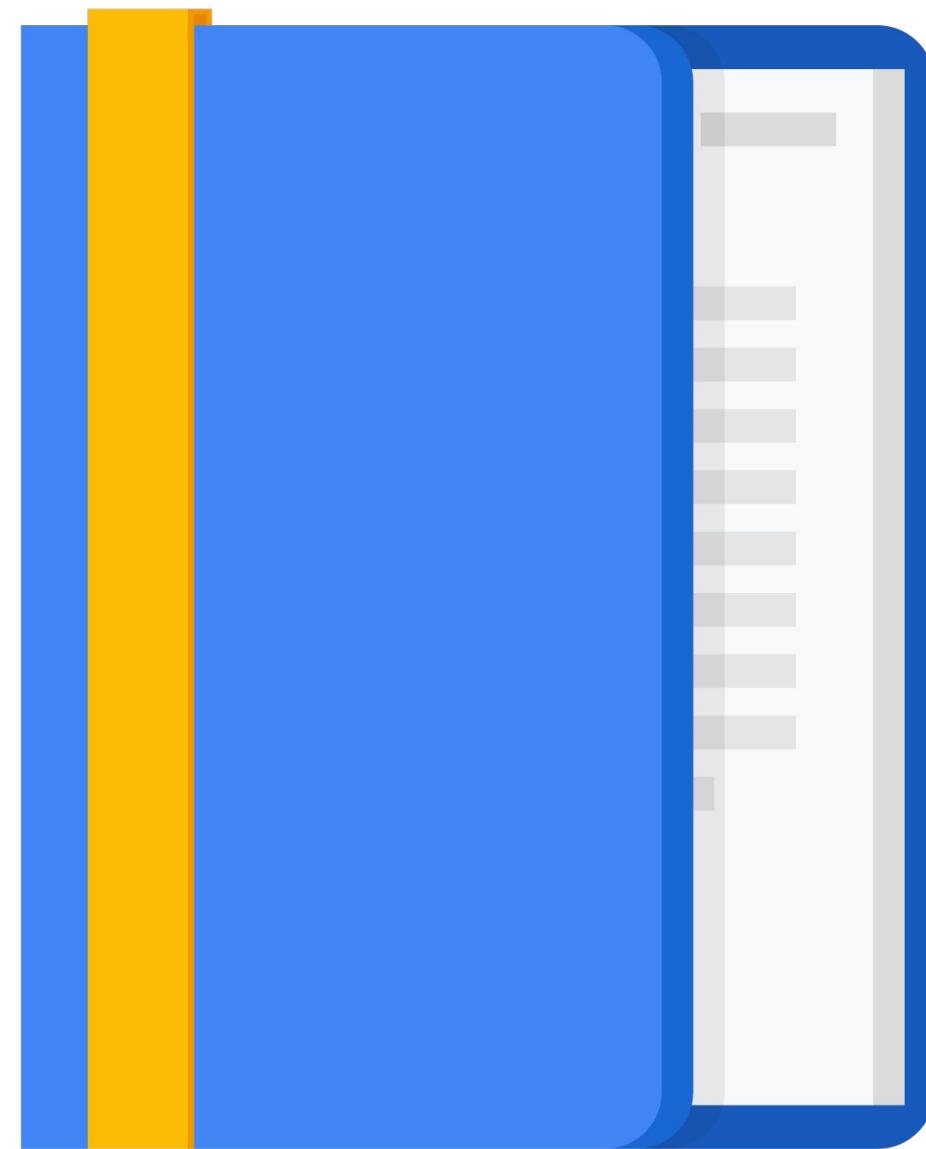
Google Cloud

Prebuilt ML model APIs for Unstructured Data

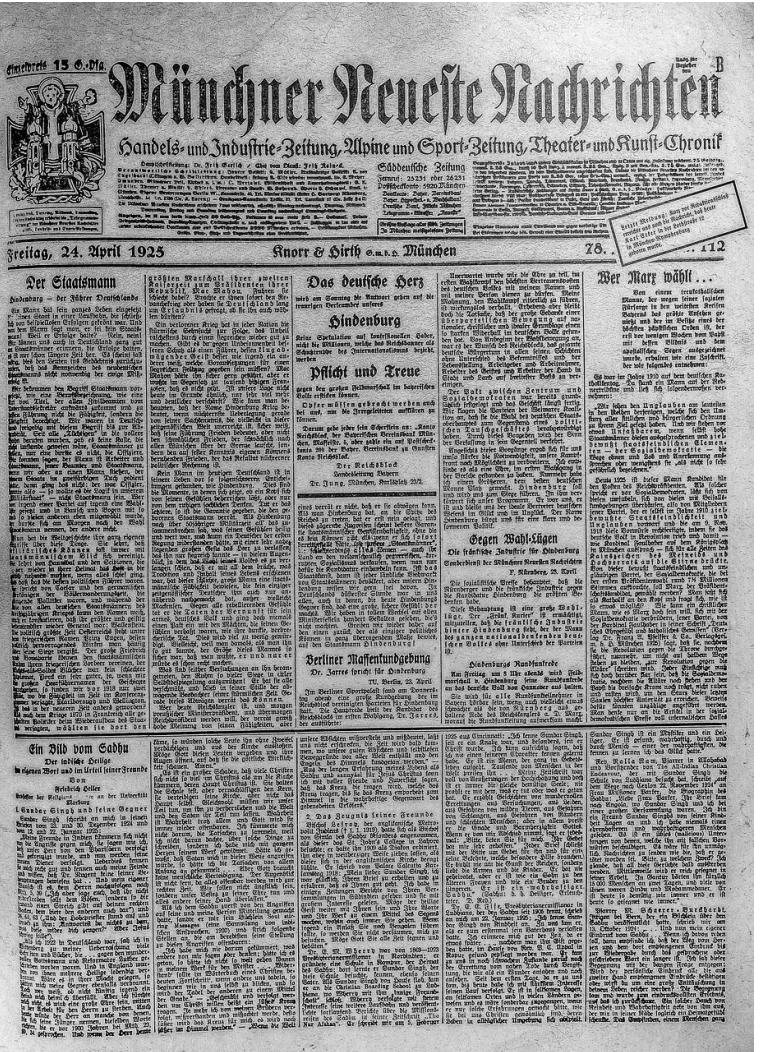
Agenda

Unstructured Data is Hard

ML APIs for Enriching Data



How do you extract anything useful out of this?



or



Examples of real-world use cases of unstructured data

Custom image
model to price
cars

Build off NLP
API to route
customer emails

Use Vision API
as-is to find text
in memes

Use Dialogflow
to create a new
shopping
experience



Clouds or snow-capped mountains?



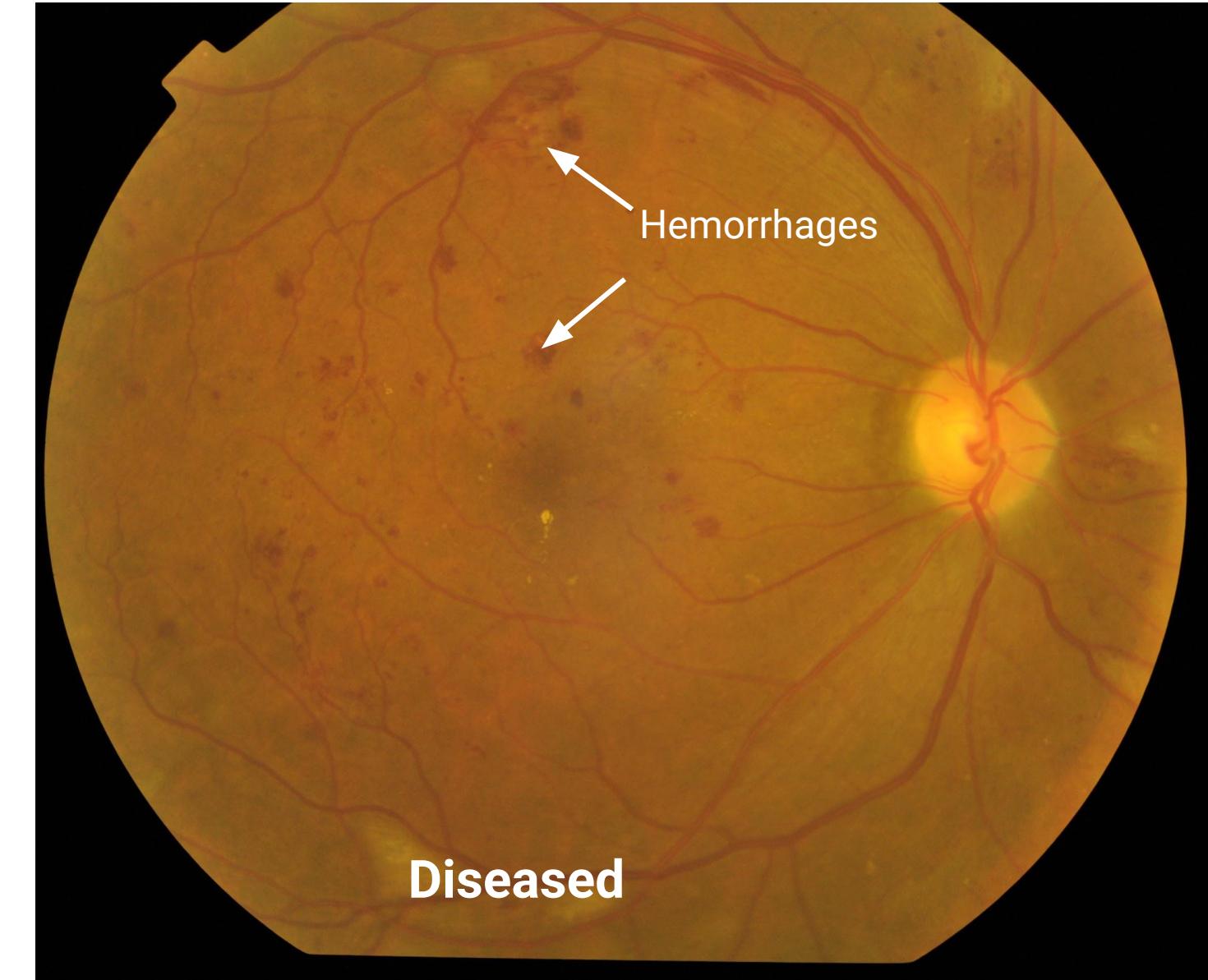
Empty or Full?



Diagnosing Diabetic Retinopathy



Healthy



Diseased

For common ML tasks, consider Pretrained APIs

Build a Custom Model



Cloud TPUs



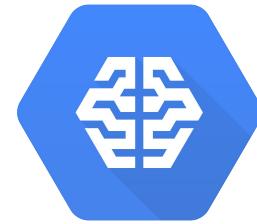
Compute Engine



Cloud Dataproc



Kubernetes Engine



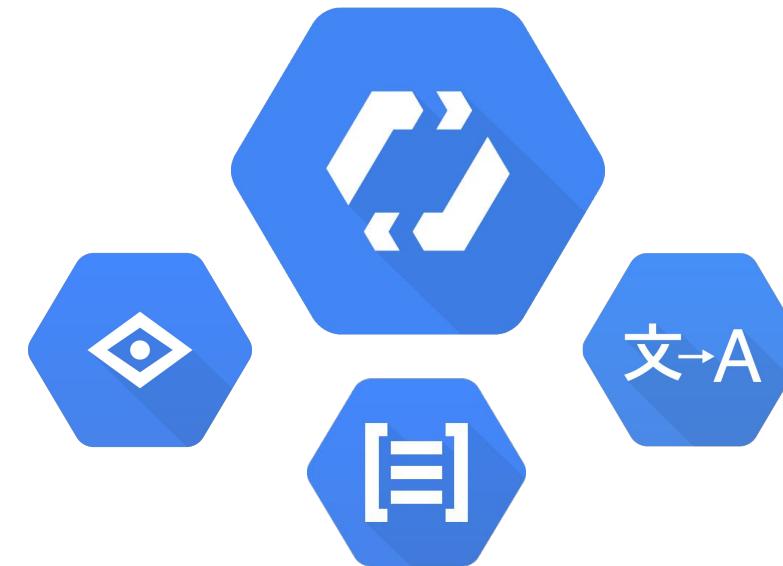
Cloud AI Platform



BigQuery ML

Build Custom Model (codeless)

AutoML



Call a Pretrained Model



Cloud Translation API



Cloud Vision API



Cloud Speech API



Cloud Video Intelligence API



Data Loss Prevention API



Cloud Speech Synthesis API



Cloud Natural Language API

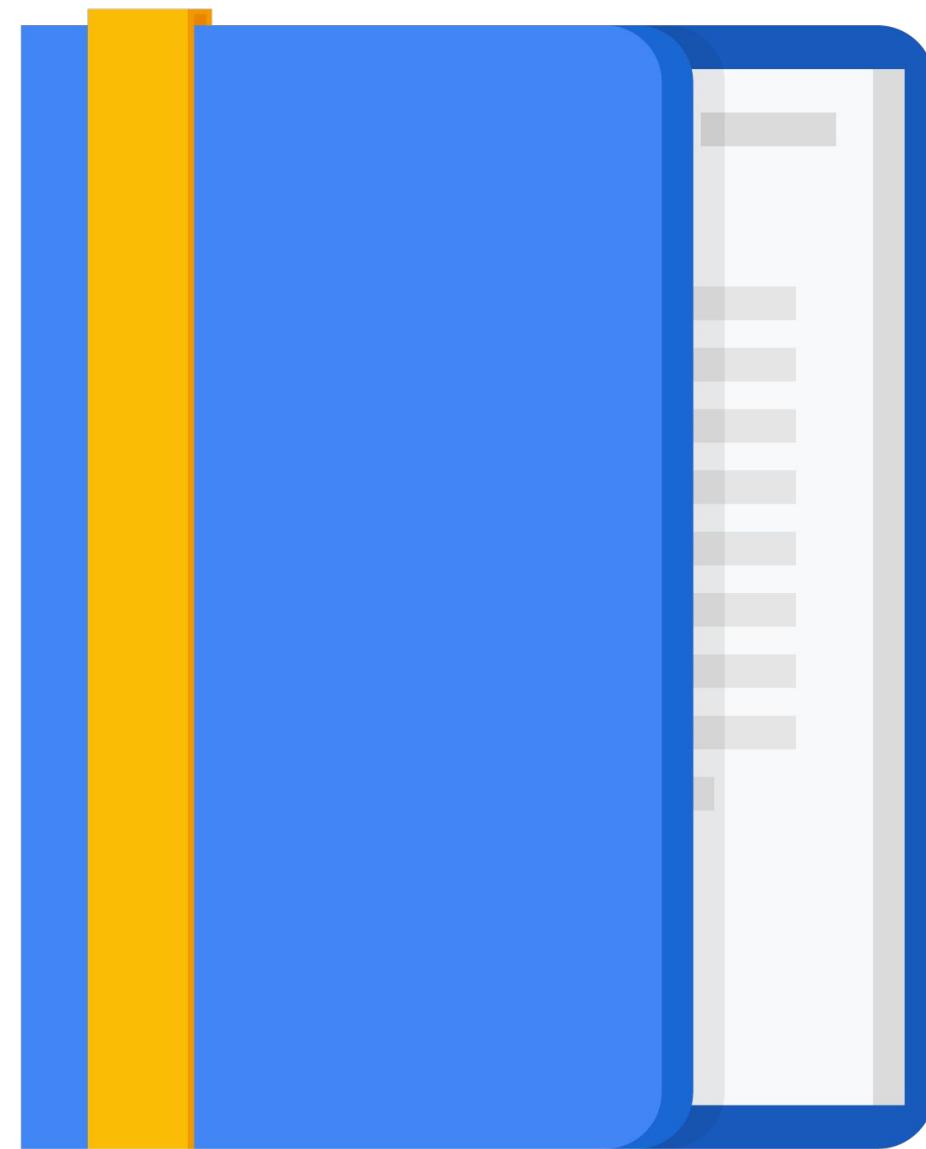


Dialogflow

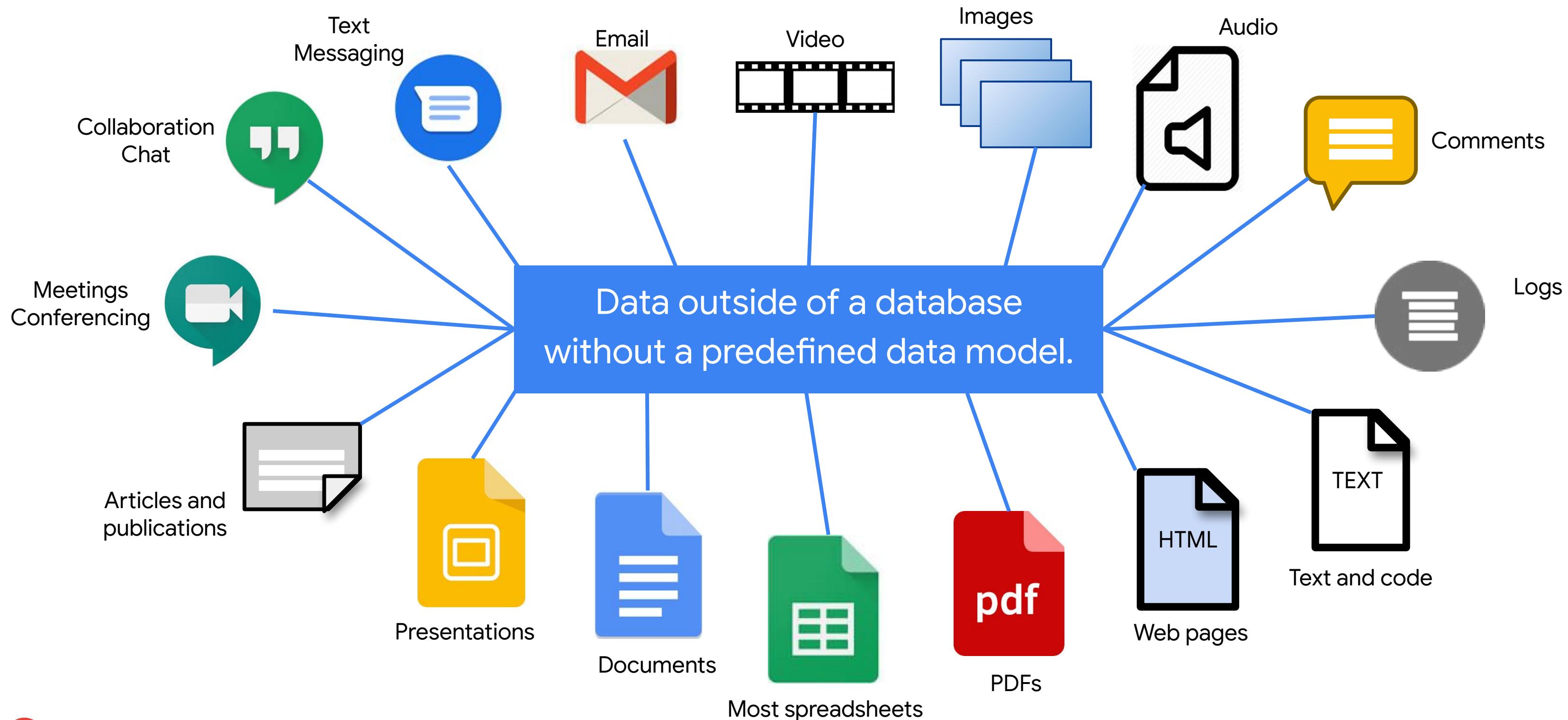
Agenda

Unstructured Data is Hard

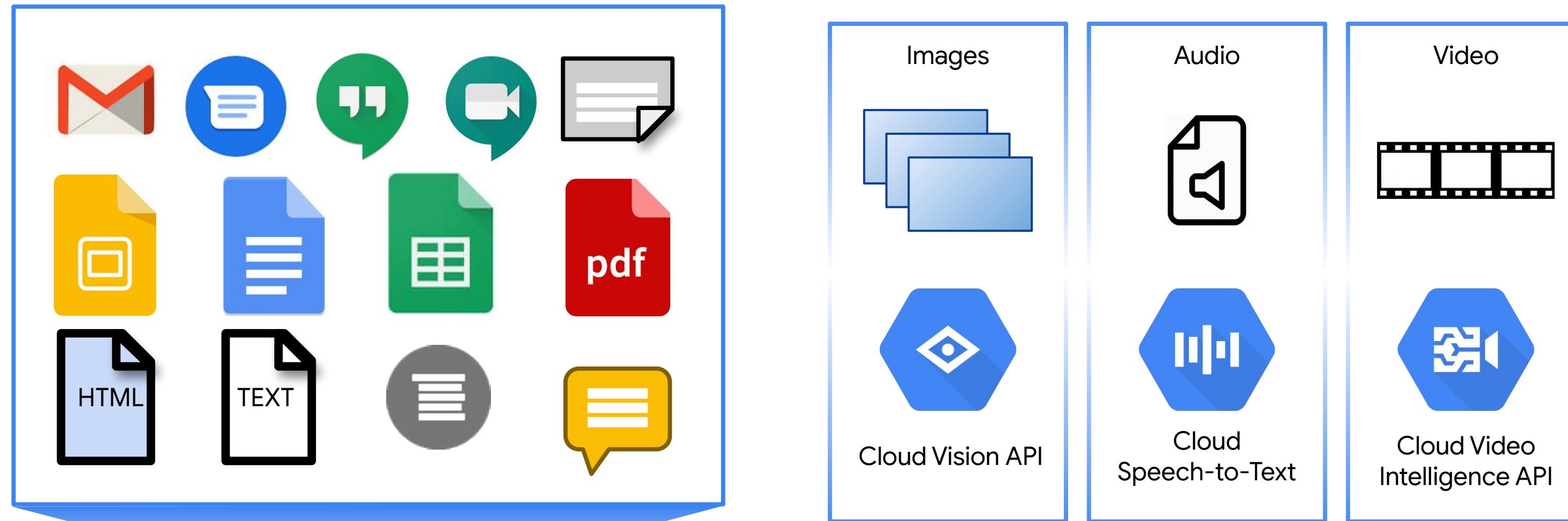
ML APIs for Enriching Data



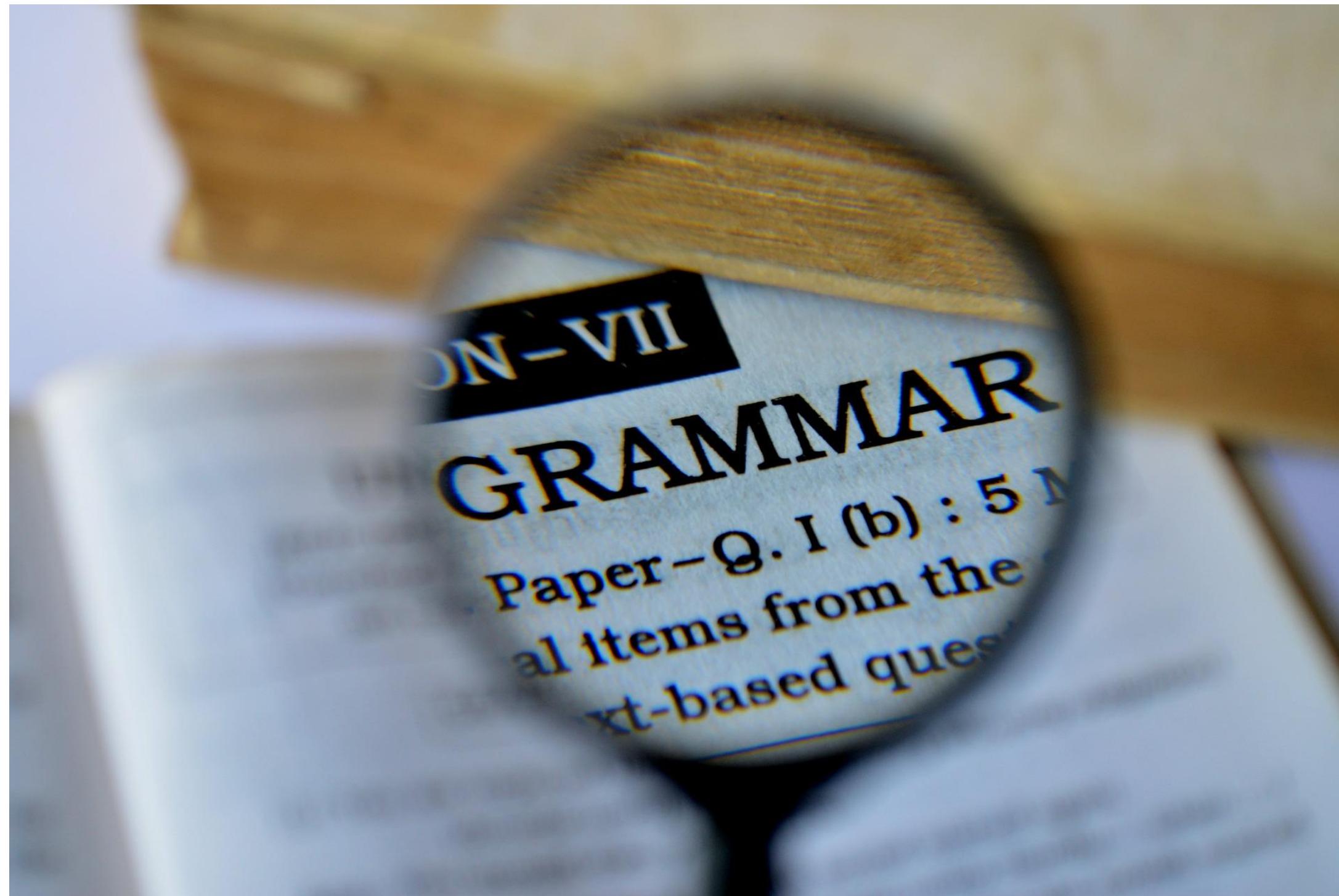
Most business data is unstructured data, and mainly text



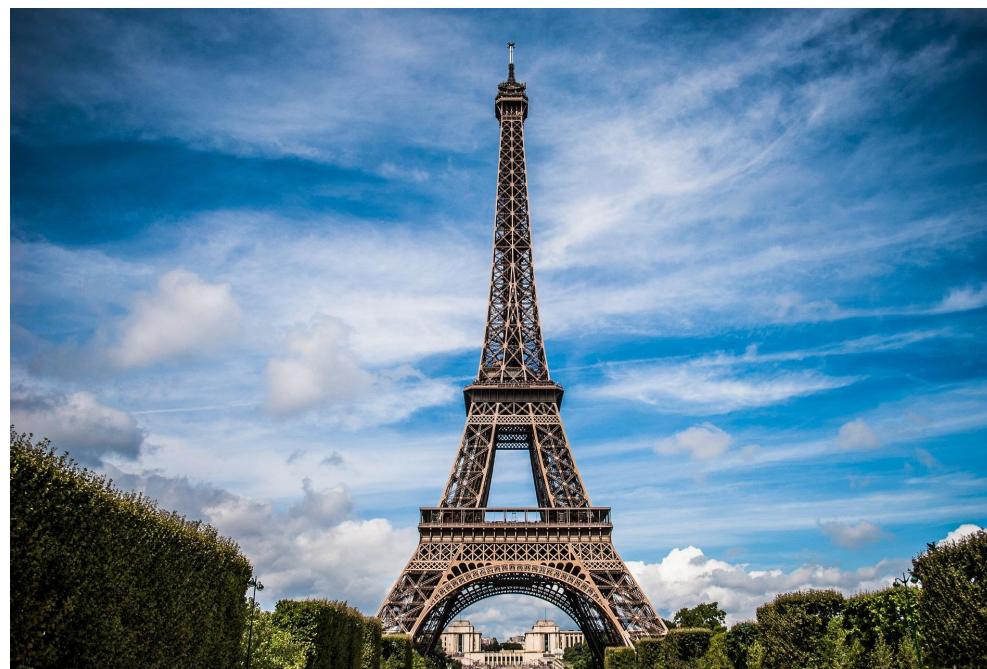
You process unstructured data by labeling it with AI



Syntactic Analysis provides linguistic information



Entity Analysis recognizes many useful items



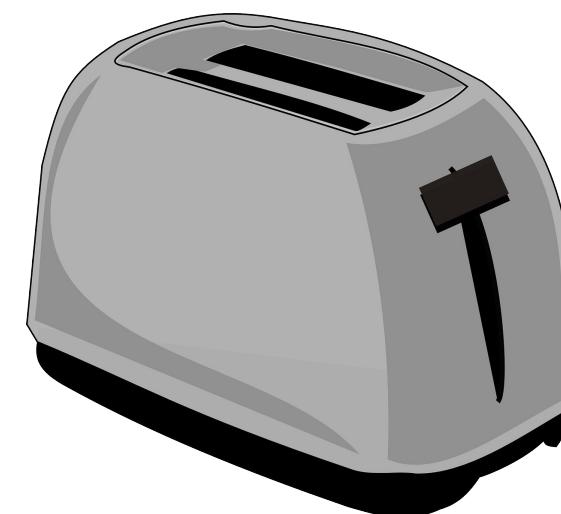
Locations and landmarks



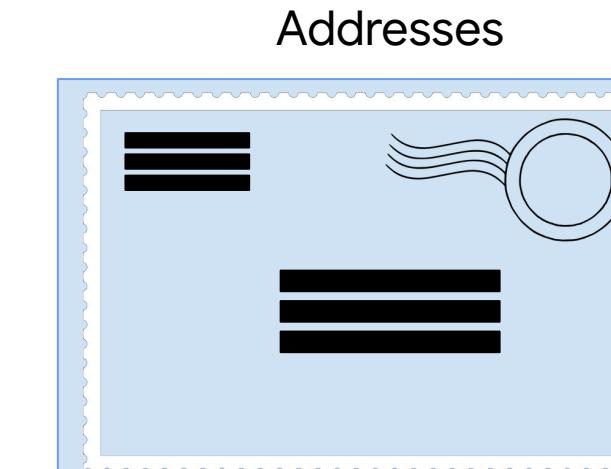
People



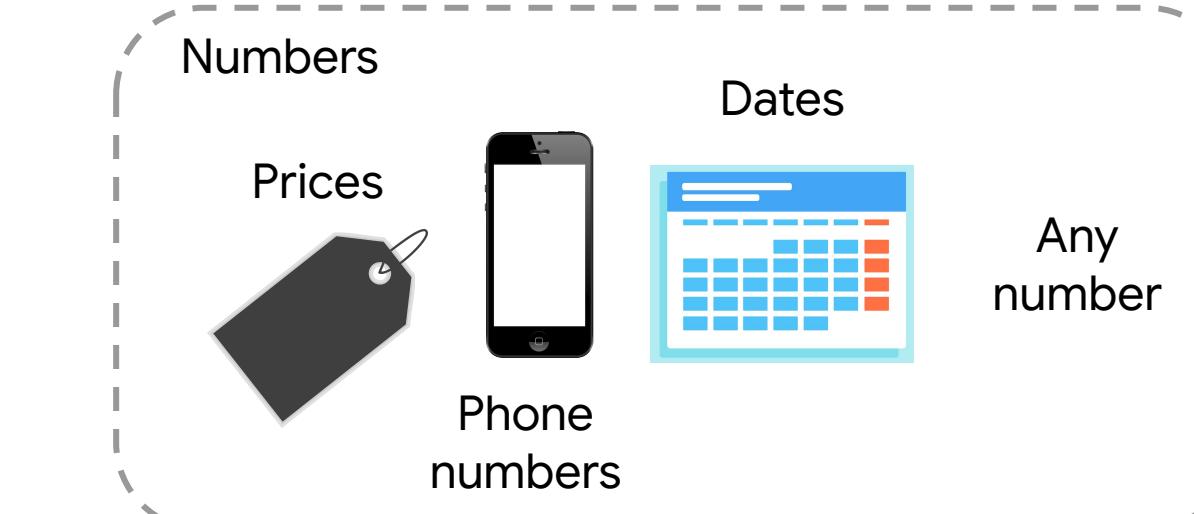
Artwork and works of art



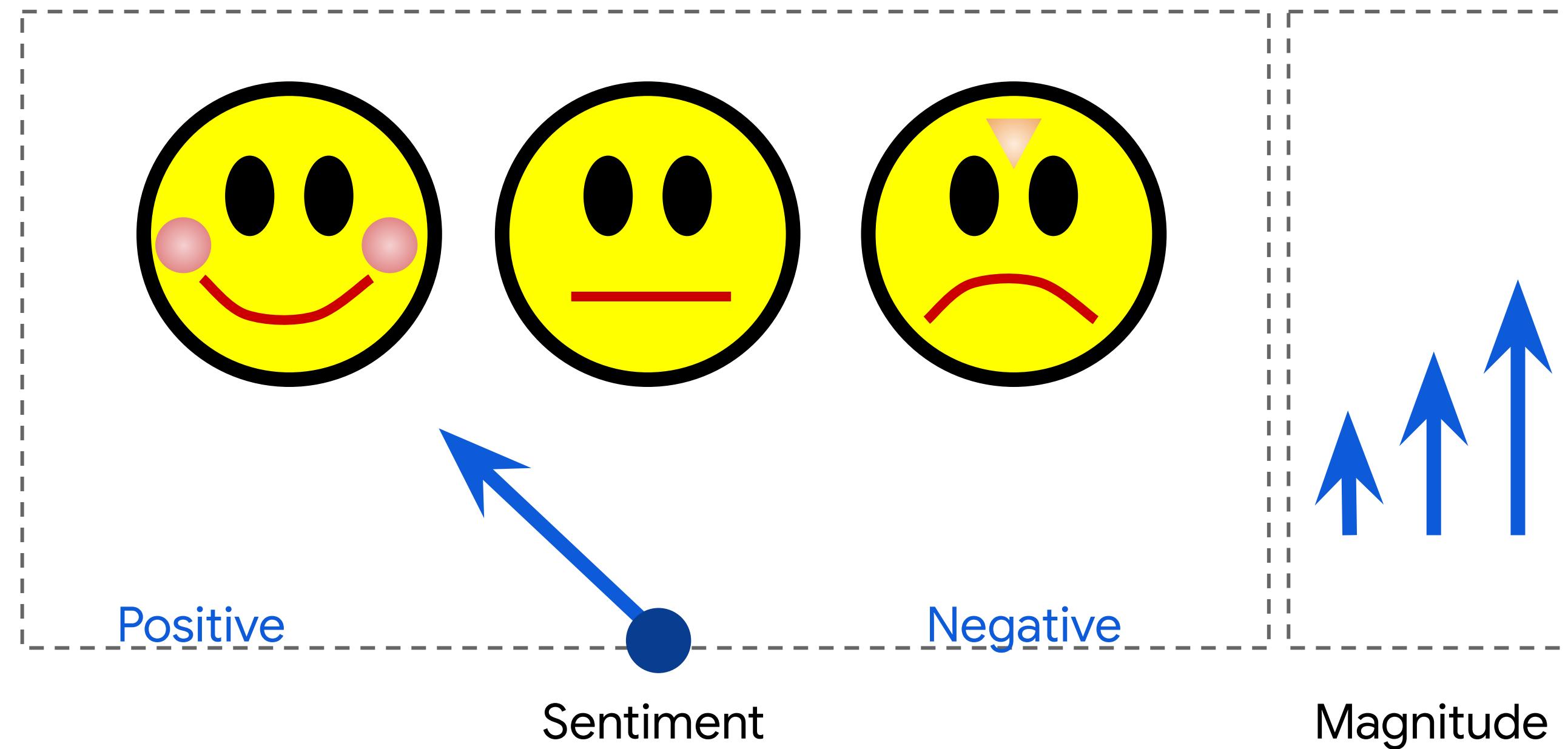
Consumer Products



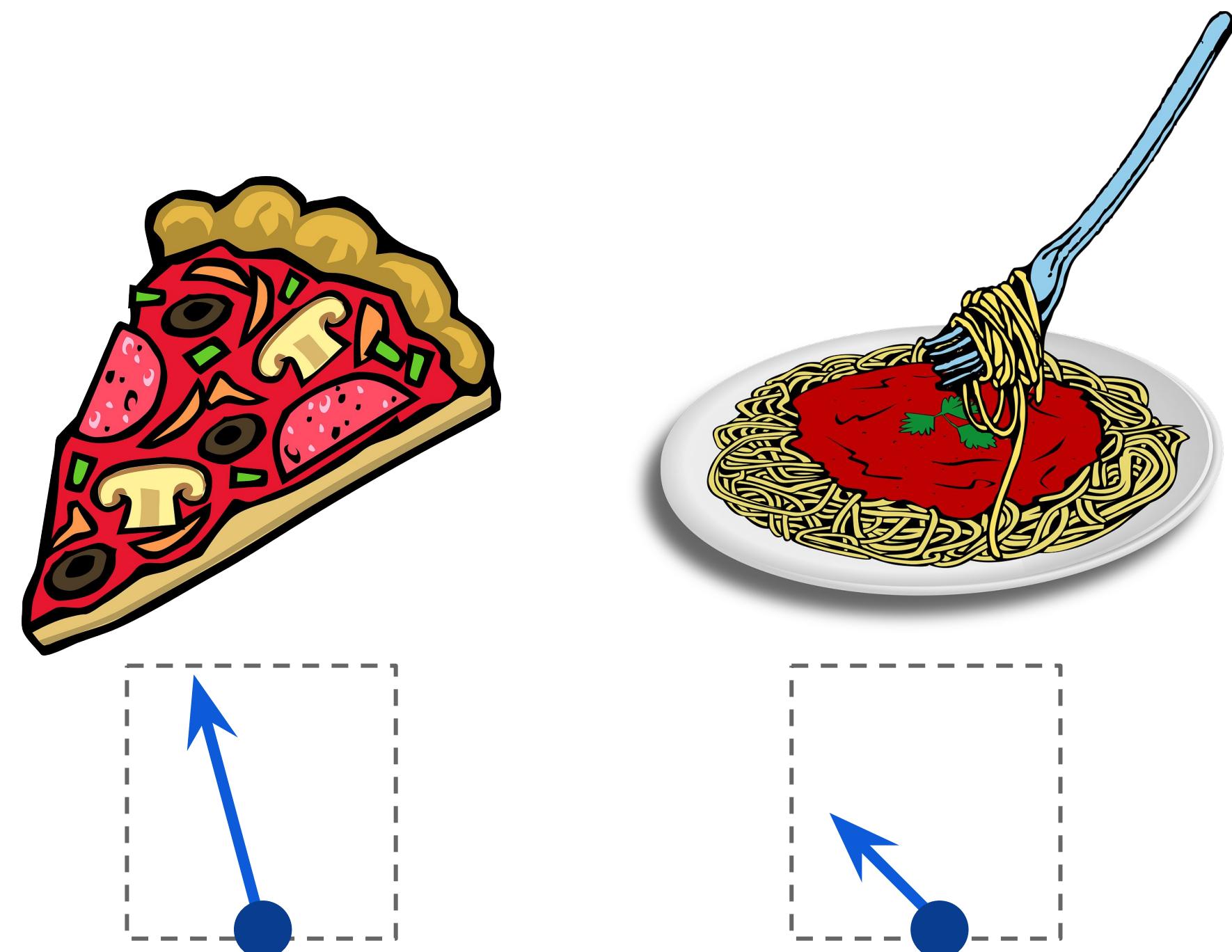
Addresses



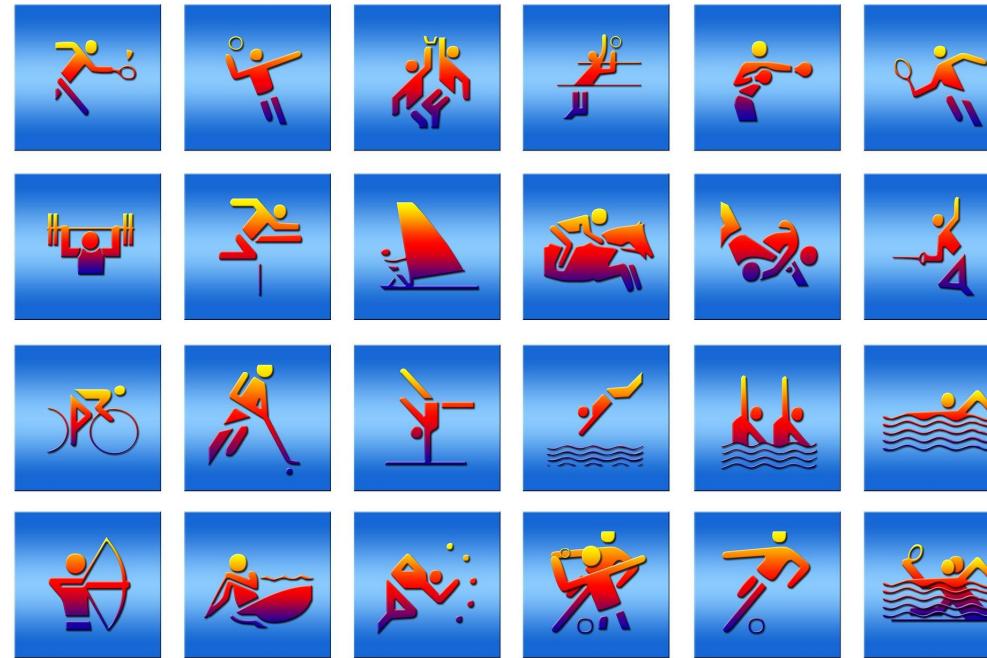
Sentiment analysis labels feelings in text



Combined Entity and Sentiment Analysis



Content Classification



Sports



Foods



Literature

600+
Categories



Lab

Using the Natural Language API to Classify Unstructured Text

Objectives

- Create a Natural Language API request
- Call the API with curl
- Use the NL API's text classification feature
- Use text classification to understand a dataset of news articles

Module Summary

- Unstructured data is omnipresent... and really hard to make useful
- Fortunately, GCP has many APIs to make unstructured data useful