

IBM Watson

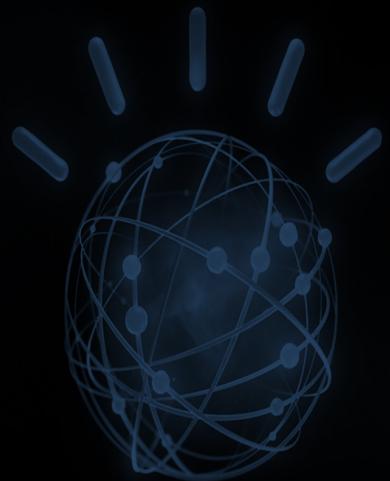
Watson Developer Cloud

Build with Watson

IBM



Watson is creating a new partnership
between people and computers
that **enhances**, **scales** and **accelerates**
human expertise.



What is Cognitive Computing

- *Cognition is the set of all mental abilities and processes related to knowledge: attention, memory and working memory, judgment and evaluation, reasoning and "computation", problem solving and decision making, comprehension and production of language, etc. Human cognition is conscious and unconscious, concrete or abstract, as well as intuitive (like knowledge of a language) and conceptual (like a model of a language). Cognitive processes use existing knowledge and generate new knowledge.*

Wikipedia: <https://en.wikipedia.org/wiki/Cognition>

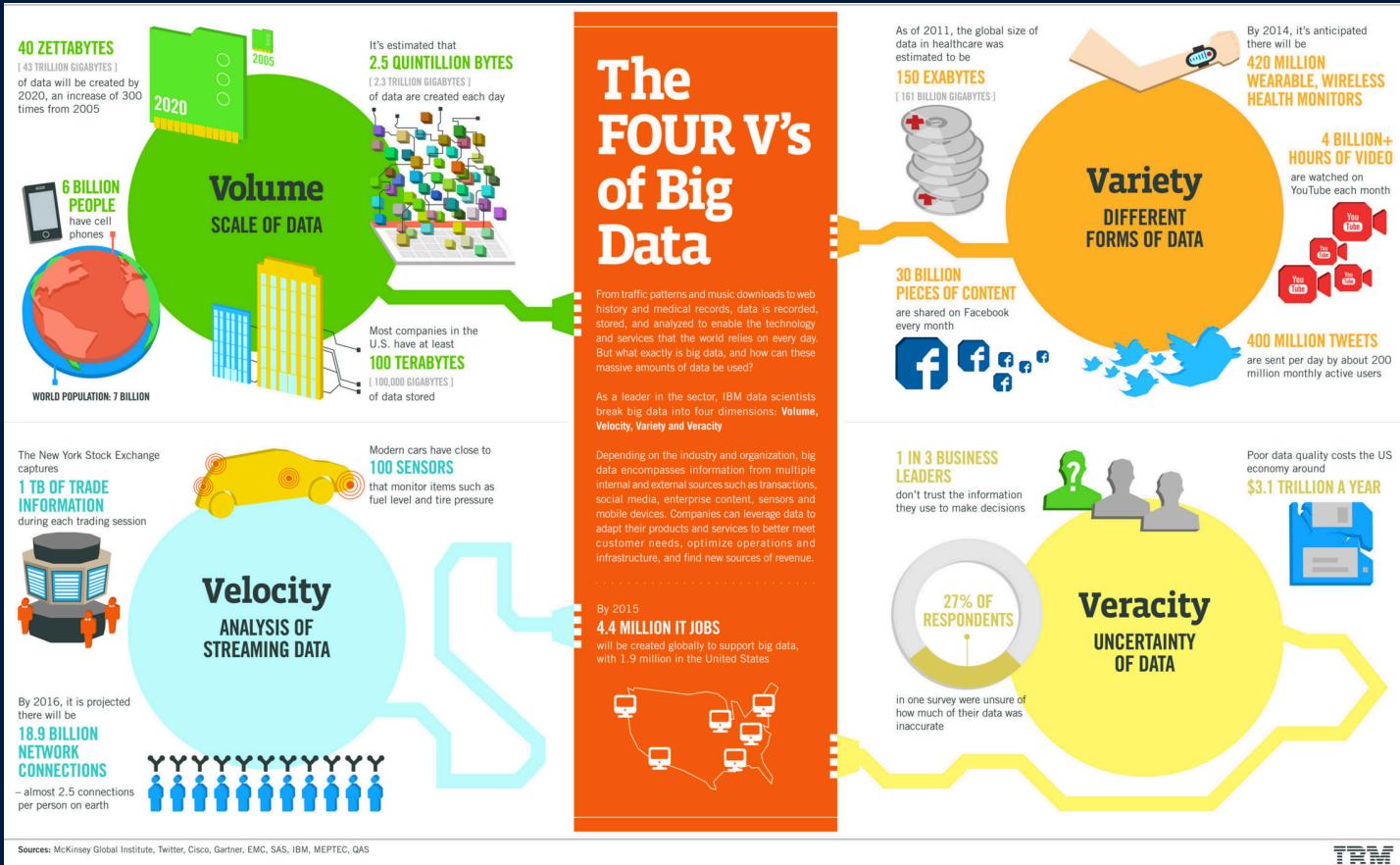
- *Cognitive computing systems learn and interact naturally with people to extend what either humans or machine could do on their own. They help human experts make better decisions by penetrating the complexity of Big Data.*

IBM Research: <http://www.research.ibm.com/cognitive-computing>

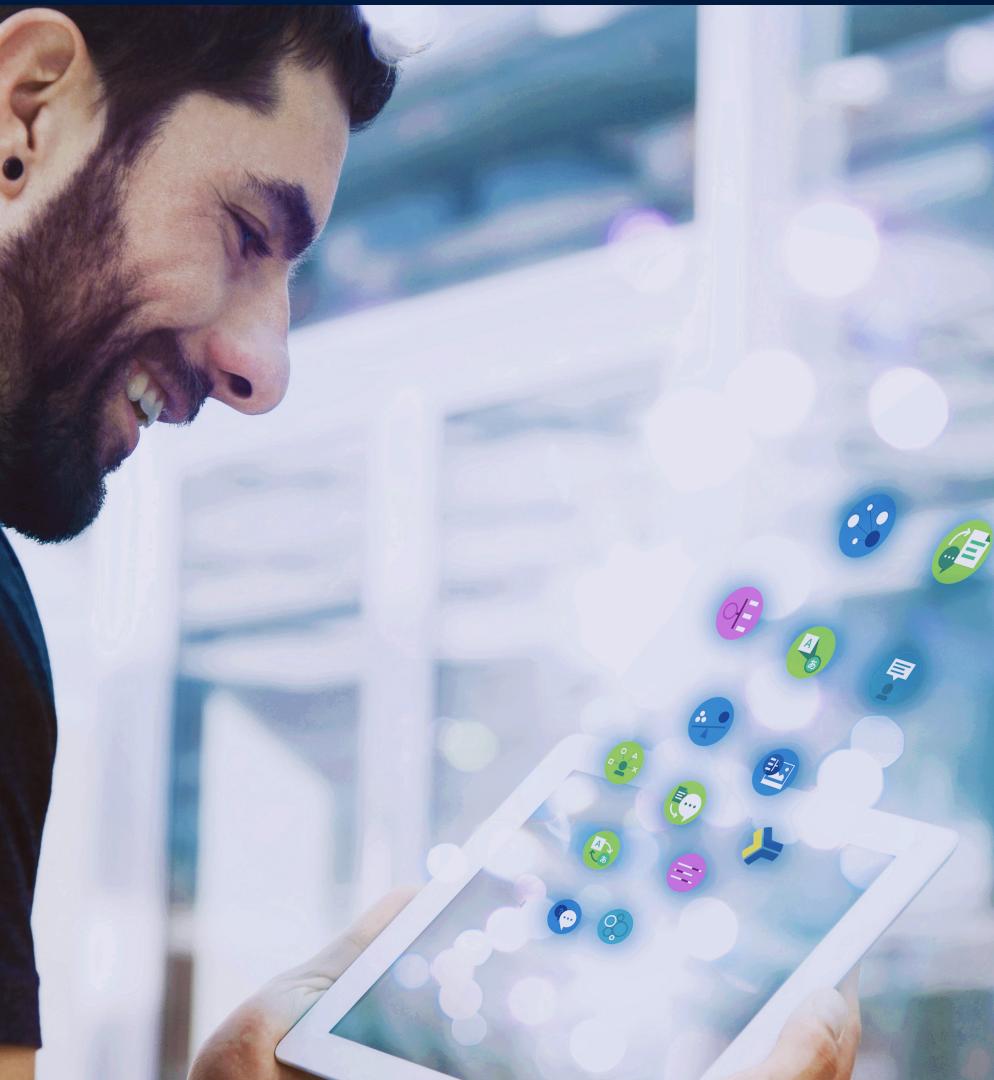
- *Cognitive systems are fundamentally different... Cognitive systems are capable of learning from their interactions with data and humans—essentially continuously reprogramming themselves... the machines of the future will do much more than compute. They will be able to sense, learn and better predict the consequences of actions. In the years ahead, machines will cull insights from the vast amounts of information being gathered to help us learn how the world really works, and make sense of all of that complexity, and provide trusted advice to humans ...*

*Dr. John E. Kelly III (IBM Senior Vice President and Director of IBM Research)
<http://asmarterplanet.com/blog/2012/05/welcome-to-the-era-of-cognitive-systems.html>*

Why Cognitive Computing



The volume, velocity, variety, and veracity of data is creating an unprecedented opportunity and a need for real-time insights and evidence based decision making.



Watson Developer Cloud: Build with Watson



Rapid Innovation in
Cognitive Solutions



Make your apps Read, Hear,
Talk, See & Learn



Self-Serve environment
» Cloud access to API's
» Developer environment
• API's, SDK's, Demos,
Code, App Gallery, Forum

Rapid growth: Developers and Partners world wide are infusing cognitive capabilities into their applications & products

80,000+

Developers
WW
across 84 countries

3B

Peak API
calls / mo

10,000+

Apps in test,
experimentation
or production

525+

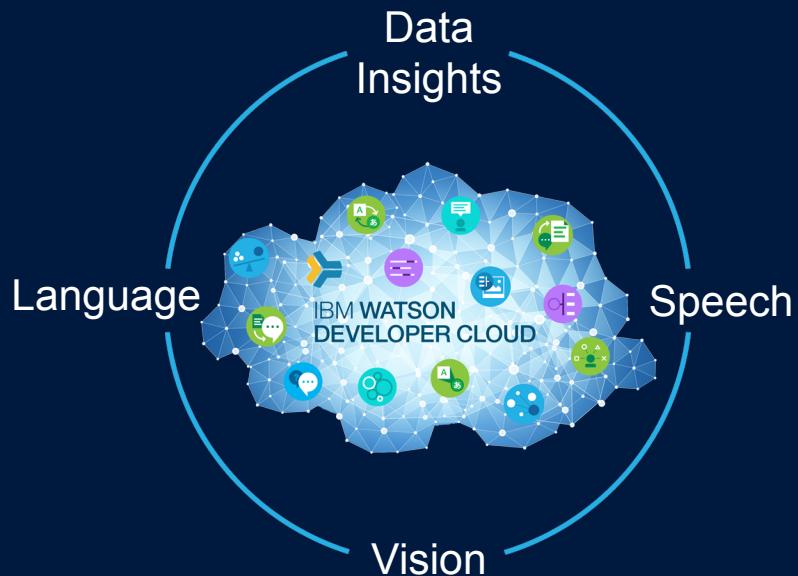
Partners in
17 industries &
36 countries

WW Watson Client Experience Centers

*From NY to Singapore,
London, Melbourne, Dublin &
San Francisco*

Watson Developer Cloud provides developers easy access to cognitive building blocks

Watson cognitive services are grouped into four categories



Access the site to see the latest
additions and updates
[Watson Developer Cloud](#)

Language

- AlchemyLanguage
- Personality Insights
- Dialog
- Natural Language Classifier
- Retrieve and Rank
- Language Translation
- Concept Expansion
- Concept Insights
- Tone Analyzer
- Relationship Extraction
- Document Conversion

Data Insights

- AlchemyData News
- Tradeoff Analytics

Speech

- Speech to Text
- Text to Speech

Vision

- AlchemyVision
- Visual Insights
- Visual Recognition

Embed Watson APIs into current solutions

Startups and large enterprises embed Watson cognitive capabilities into existing solutions.

IBM Watson Explorer users leverage integrated Watson APIs to expand cognitive capabilities

The screenshot displays a customer profile for 'Brandon Hatcher' from 'FlexRate Insurance'. The profile includes sections for Customer Information, Demographic Information, Family Members, and Vehicles. A central 'Ask Watson' feature allows users to interact with Watson via natural language. To the right, there are several analytical visualizations: a donut chart for 'Purchased Policies', a personality insights chart for 'SystemU Analysis', and a pie chart for 'Claims Information'. A sidebar on the right shows interactions and latest activity.

Q&A through Dialog and Natural Language Classifier

Understand your customer with Personality Insights

Combine Watson APIs for higher value apps

Example: Interactive Q&A with greater understanding and personality

Speech to Text,
Text to Speech



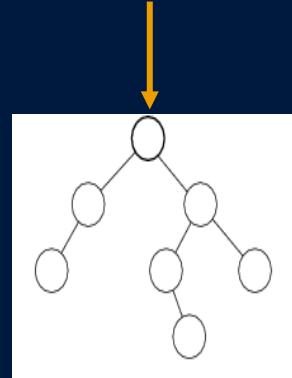
How do I open an account?
Convert Speech to Text

Natural
Language
Classifier



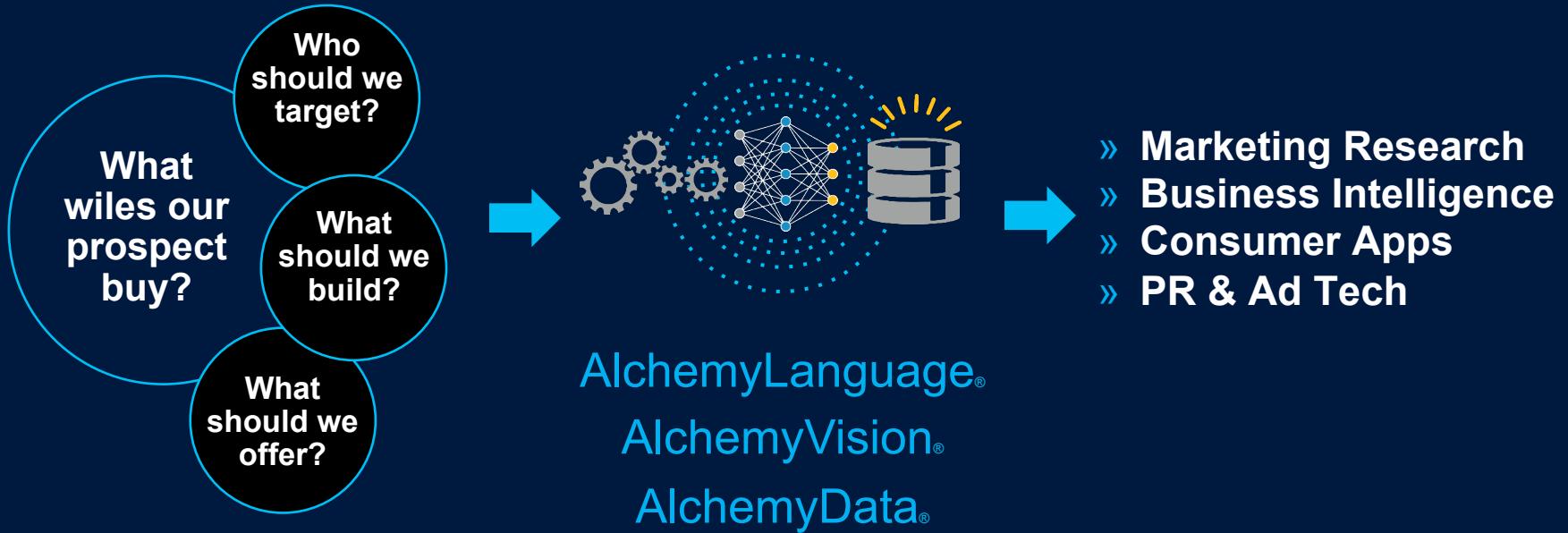
Identify Intent
-Intent = "Open_Account"
-Confidence: 0.876655900

Dialog



Dialog tree walks user to desired outcome
- Intent="Open_Account"
- Context = "Online Banking"
- Dialog could call a DB or CMS

Answer business questions with natural language processing and image analytics



Get started: Explore, Experiment, Build

1

Explore the Watson services

Demos. Concept Videos. Docs.

IBM.com/WatsonDeveloperCloud

3

Do the LABS

ibm.biz/node-red-basics

ibm.biz/node-red-alchemy-vision-lab

4

Build Apps

Leverage Sample Code, App Gallery, github...

Join a Hackathon. Ask questions in the Forum.

Try out the APIs free of charge.

Join the Watson Ecosystem

400 partners; 100 in market today

or Speed Development with Coaching

Watson Developer Cloud Enterprise

Onsite training, mentoring, services subscription

Watson Services

Dialog

What is it?

Walks a user through a step-by-step process in natural, conversational language

Why is it unique?

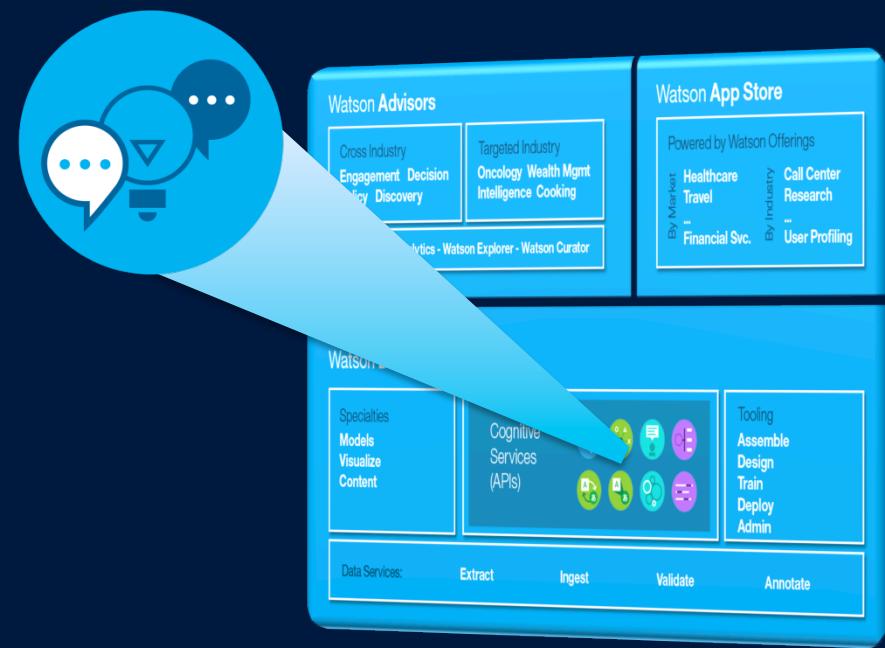
Keeps track of user conversations, can gather user information and make decisions based on user profile information

How does it work?

Provides a simple, guided experience to get a user to their desired outcome and can kick off back-end application actions as part of the process

Example Use Cases

- Decision support / Transaction handling
- Question disambiguation / Clarification
- Personality & Conversation



Natural Language Classifier - Overview

What is it?

- Performs natural language understanding. Turns text into meaning.
- Accepts short string of text and is able to classify text into predefined classes

Primary Use Case

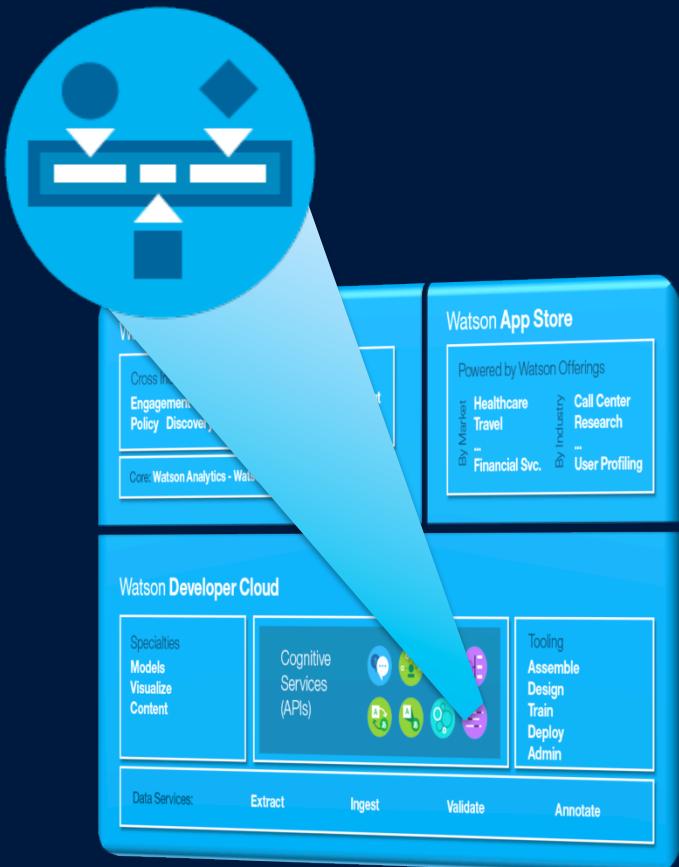
- Question & answer, classifying Twitter/SMS, sentiment analysis, dialog act classification

Value Proposition

- State of the art classifier tailored & tuned for 'short text'

Adjacent Services

- Dialog, Speech to Text, Text to Speech



Retrieve and Rank

What is it?

Helps users find relevant information for their query by using a combination of search and machine learning algorithms that detect "signals" in the data

Why is it unique?

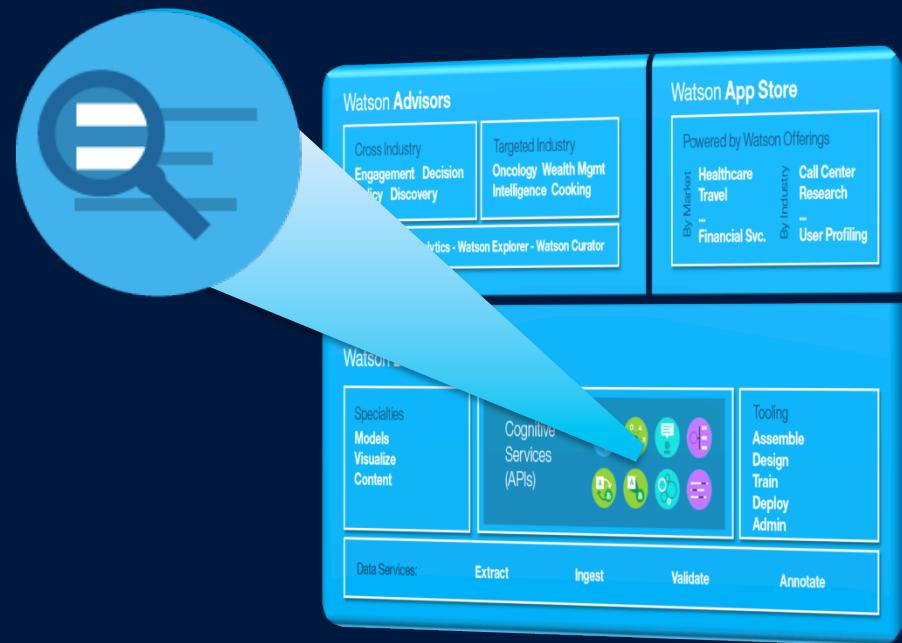
Machine learning approach provides superior information retrieval within a vast content repository

How does it work?

Re-ranks search results based on a trained machine learning model

Example Use Cases

- Contact Centers in support of Client inquiries
- Field technicians troubleshooting a problem



Document Conversion

What is it?

API based solution to convert documents with input format (PDF, Word, HTML) to output formats (HTML, Text, JSON needed for other Watson Services) synchronously or in a batch

How does it contribute to cognitive computing?

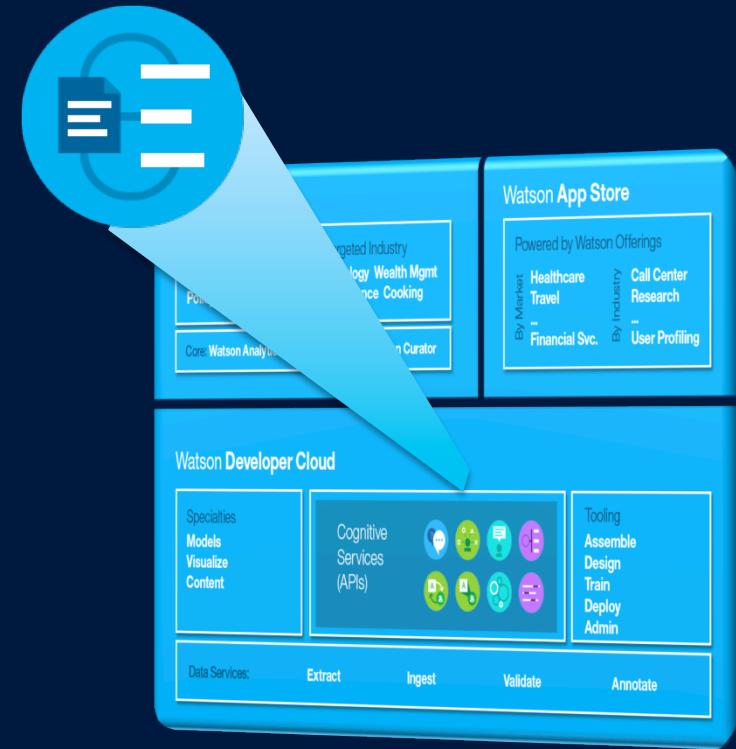
Automatically converts customer documents in varied formats to the format necessary for consumption by Watson services (training, data)

How does it work?

Users uploads documents in any supported format, chooses output format, and calls the API to perform the conversion

Example Use Cases

- Company bulk imports corporate training material documents to train Watson services such as Retrieve and Rank and NLC



Personality Insights

What is it?

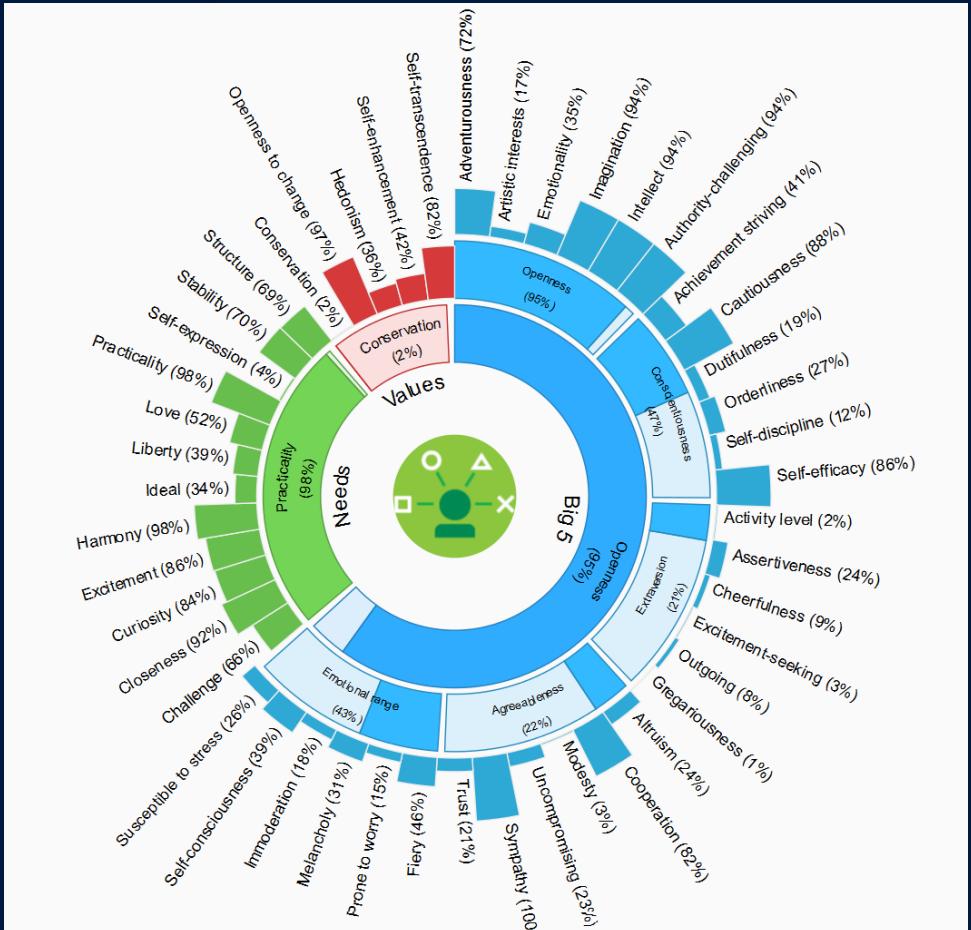
Enables deeper understanding of people's personality characteristics, needs, and values to help engage users on their own terms

How does it work?

Extracts a set of personality and social traits based on the way a person communicates.

Example Use Cases

- Brand Analytics
 - Market Segmentation & Campaigns
 - Customer Care



Tradeoff Analytics

What is it?

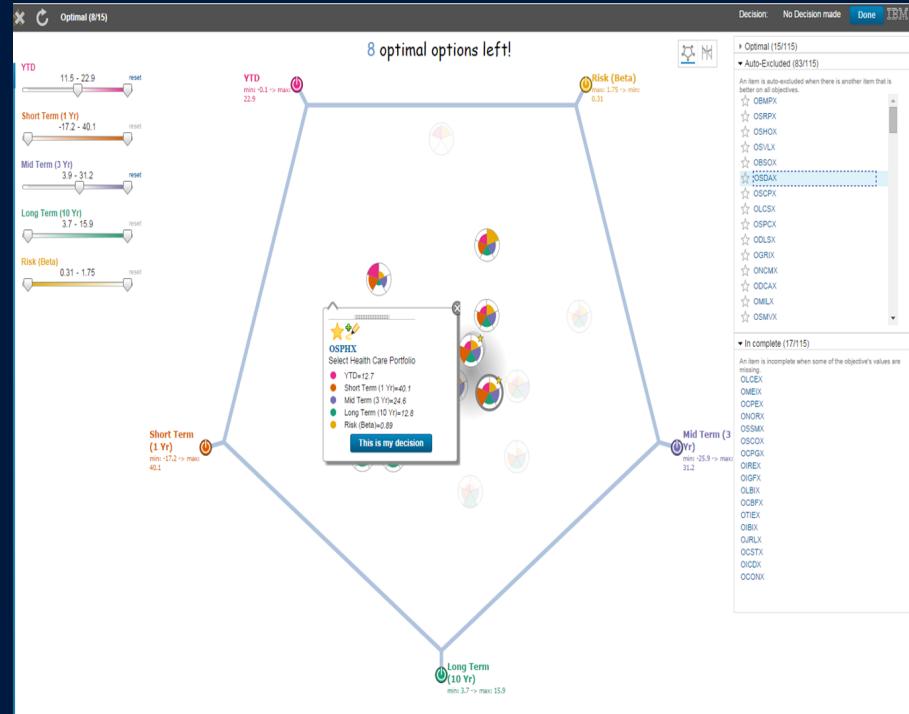
Helps make better choices under multiple conflicting goals with smart visualizations and analytical recommendations.

How does it work?

Uses Pareto filtering techniques in order to surface only the optimal alternatives across multiple criteria. It then uses various analytical and visual approaches to help the decision maker analyze the tradeoffs.

Use Cases

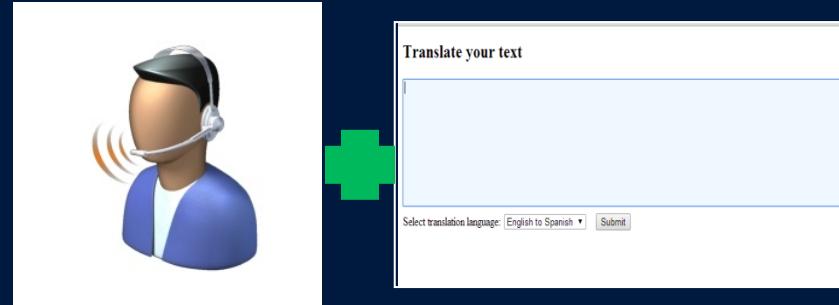
- Enable retailers and manufacturers to determine product mix
- Allow consumers to compare and contrast competitive products or services



Language Translation

What is it?

High-quality, domain-specific text translation from one language to another. Language Identification (included) identifies the text input language. Model customization enables support for specific translation needs.



Why is it unique?

One of the few offerings that focuses on Domain-specific Statistical Machine Translation

What domains & languages are supported?

- The News domain, to translate English to / from French, Spanish, Portuguese, or Arabic
- The Conversational domain, to translate English to / from Spanish or Portuguese
- The Patent domain, to translate Spanish, Portuguese, Japanese, or Korean to English

Use Case Example

Enables a help desk representative to assist international customers through a chat



Speech to Text

What is it?

Low-latency, streaming transcription

Why is it unique?

Unique combination of breadth of language support, specific Telephony model support, and ease of contracting and use through Bluemix

What languages and features are supported?

- English (US), Spanish, Japanese
- Wideband and Telephony models
- Metadata (confidence scores, time offsets, alternate hypotheses)

How does it work?

In addition to converting a raw audio signal into a best-guess of the words that are being spoken, intelligence about the relevant grammar / how language is used within a specific context is incorporated to generate a more accurate transcription

Example Use Cases

- Call center – recorded audio transcription
- Voice-control of devices or applications
- Transcription of meetings, lectures and conference calls
- Dictation of emails. Mobile apps.



Welcome to the Watson Developer Cloud.

A large white rectangular placeholder box with rounded corners and a thin gray border. Inside, there is a smaller white box with a speech-to-text interface, featuring two horizontal progress bars with small black dots and a central vertical line.

Resources

- Blog: [IBM Watson announces breakthrough in Conversational Speech](#)
- Paper: [The IBM 2015 English Conversational Telephone Speech Recognition System](#)
- Blog - Initial announcement - [IBM Watson now brings cognitive speech capabilities to developers](#)

Text to Speech

What is it?

Generates an audio file that has a verbal representation of the input text – complete with appropriate cadence and intonation.

Why is it unique?

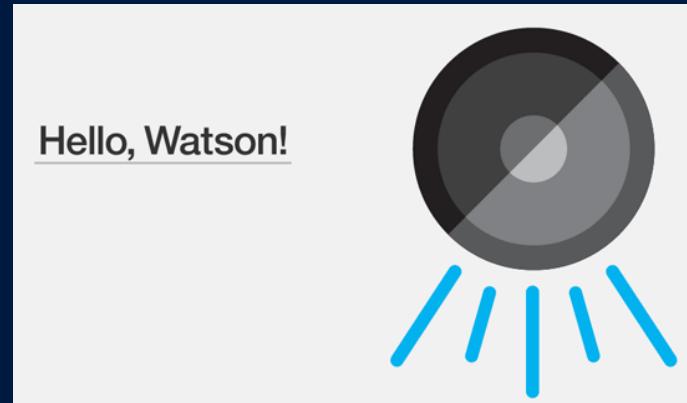
One of the most natural-sounding and easy to use APIs on the market.

How does it work?

- Converts textual input into speech. Supports:
- Multiple voices in US English, UK English, Spanish, French, Italian, and German
- A subset of SSML (Speech Synthesis Markup Language)
- Improved programming support for applications that reside outside of Bluemix

Example Use Cases

- Mobile apps.
- Assistance tools for the vision-impaired.
- Read texts / emails aloud.



Resources

- [IBM Watson now brings cognitive speech capabilities to developers](#)
 - Discusses the technology behind the capability

Concept Insights

What is it?

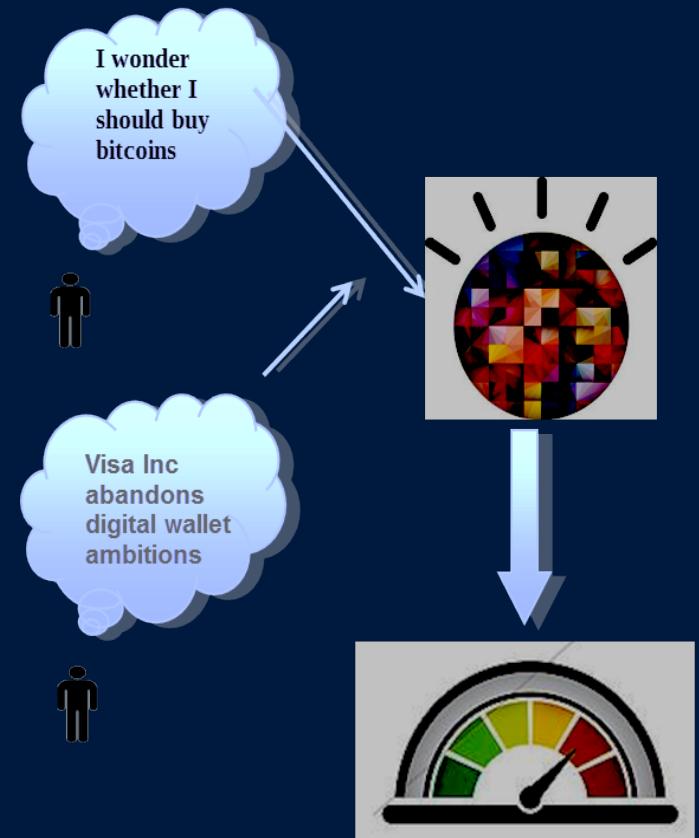
Locate relevant documents that may not directly mention your query.

How does it work?

Maps user-input words to the underlying concepts of those words based on training on English Wikipedia data. The service identifies explicit links when an input document directly mentions a concept, and implicit links when relevant concepts that are not directly mentioned.

Example Use Cases

- A legal firm could utilize this service to identify cases which may be related to the case in question
- Improve engagement on any external website



AlchemyLanguage

What is it?

Twelve APIs for text analysis, each of which uses sophisticated natural language processing techniques to analyze content and add semantic information

How does it work?

Advanced deep learning techniques power web services such as sentiment analysis, entity extraction, keyword extraction, content tagging and more for holistic insights.

Example Use Cases

- Content aggregation
- Twitter sentiment analysis
- Business intelligence
- Content discovery



Entity Extraction
Sentiment Analysis
Keyword Extraction
Concept Tagging
Relationship Extraction
Taxonomy
Classification

Author Extraction
Language Detection
Text Extraction
Microformats Parsing
Feed Detection
Linked Data Support
Tone Analyzer



AlchemyVision

What is it?

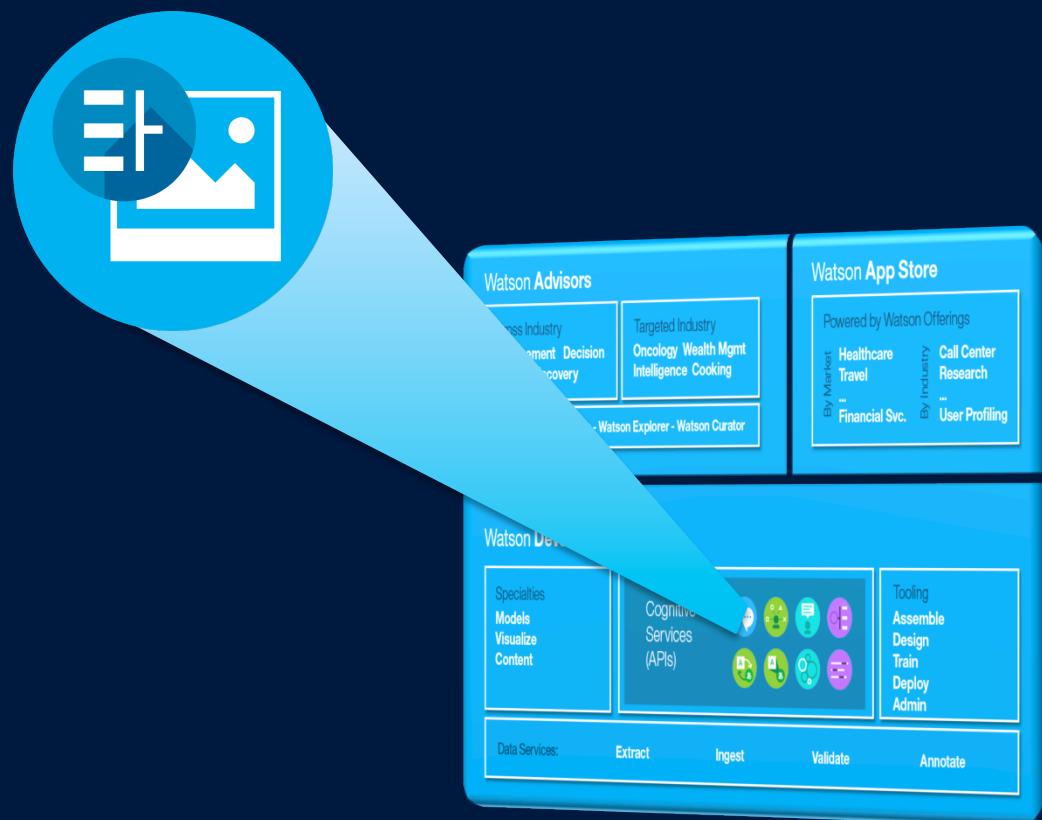
Automatically extract and tag images to understand a picture's content and context

How does it work?

Uses advanced visual recognition to see complex scenes in their entirety—without needing any textual clues—to understand objects and surroundings

Example Use Cases

- Content recommendation
 - Social media monitoring
 - Ad targeting
 - Facial recognition



AlchemyData News

What is it?

A constantly updating pipeline of content that is crawled, enhanced and stored for consumption – allowing you to query the world's news like a database in real time.

How does it work?

Aggregates data from a variety of sources, enriches it with natural language processing and stores it for single-query consumption.

Example Use Cases

- Signal detection
- News alerting
- Event detection ("acquisitions")
- Trending topics, concepts, people in the news



More Watson Cognitive Services: A growing set of services

Watch for new releases -- GA, Beta and Experimental



Emotion Analysis

Detects anger, disgust, sadness, fear, and joy, from text such as survey comments, online reviews, and social media posts.



Tone Analyzer

Helps users understand the attitudes that are implied in text



Visual Recognition

Analyzes the visual content of images and video frames to understand their content . Trainable for custom content.



Visual Insights

Analyzes online photos and video to extract insights related to interests, activities, hobbies, life events, and products.



Relationship Extraction

Intelligently finds relationships between sentences components



What will you build with Watson?

IBM Watson Developer Cloud

Link:

IBM.com/WatsonDeveloperCloud



Backup:

- AlchemyLanguage individual services
- WDC Beta & Experimental services

Alchemy Language

Entity Extraction

Sentiment Analysis

Keyword Extraction

Concept Tagging

Relationship Extraction

Taxonomy Classification

Author Extraction

Language Detection

Text Extraction

Mircoformats Parsing

Feed Detection

Linked Data Support

Emotion Analysis (Beta)

Entity Extraction

What is it:

Named entities specify things such as persons, places and organizations. AlchemyAPI's named entity extraction is capable of identifying people, companies, organizations, cities, geographic features and other typed entities from your HTML, text or web-based content.

How it works:

Entity extraction can add a wealth of semantic knowledge to your content to help you quickly understand the subject of the text. It is one of the most common starting points for using natural language processing techniques to enrich your content



Sentiment Analysis API

What is it:

Sentiment is the attitude, opinion or feeling toward something, such as a person, organization, product or location. AlchemyAPI's sentiment analysis API provides easy-to-use mechanisms to identify the positive or negative sentiment within any document or webpage.

The sentiment analysis API is capable of computing document-level sentiment, sentiment for a user-specified target, entity-level sentiment, quotation-level sentiment, directional-sentiment and keyword-level sentiment. These multiple modes of sentiment analysis provide for a variety of use cases ranging from social media monitoring to trend analysis.

How it works:

AlchemyAPI's sentiment analysis algorithm looks for words that carry a positive or negative connotation then figures out which person, place or thing they are referring to. It also understands negations (i.e. "this car is good" vs. "this car is not good") and modifiers (i.e. "this car is good" vs. "this car is really good"). The sentiment analysis API works on documents large and small, including news articles, blog posts, product reviews, comments and Tweets.

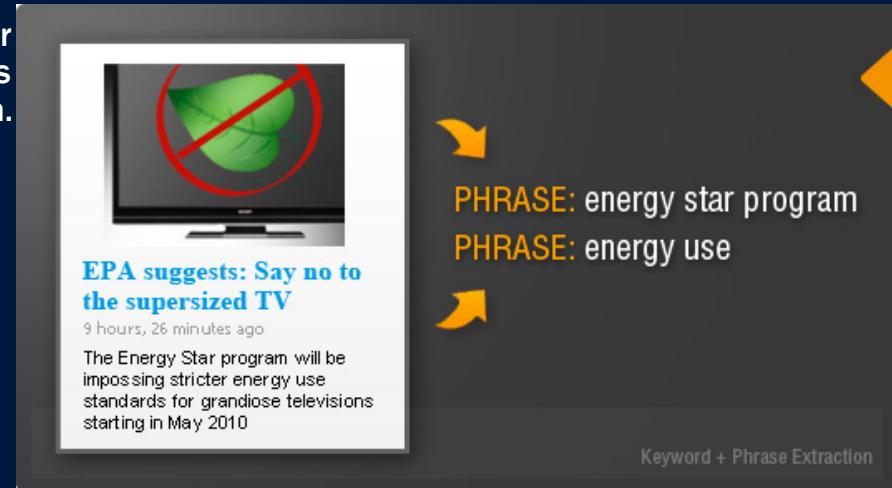


Keyword Extraction

What is it:

Keywords are the important topics in your content and can be used to index data, generate tag clouds or for searching. AlchemyAPI's keyword extraction API is capable of finding keywords in text and ranking them. The sentiment can then be determined for each extracted keyword.

The keyword extraction API works on URLs, HTML documents and plain text. Just like every other feature, AlchemyAPI automatically detects the language of the content and then performs the appropriate analysis.



A screenshot of a news article from the EPA. The article features a photograph of a television screen with a large green leaf superimposed on it, crossed out by a red circle with a diagonal line. The headline reads "EPA suggests: Say no to the supersized TV". Below the headline, it says "9 hours, 26 minutes ago". The text of the article states: "The Energy Star program will be imposing stricter energy use standards for grandiose televisions starting in May 2010". To the right of the article, there are two orange arrows pointing left, followed by the text "PHRASE: energy star program" and "PHRASE: energy use". At the bottom right of the screenshot, it says "Keyword + Phrase Extraction".

How it works:

AlchemyAPI's keyword extraction algorithm employs sophisticated statistical algorithms and natural language processing technology to analyze your content and identify the relevant keywords. Keyword extraction is supported in over a half-dozen different languages, enabling even foreign-language content to be categorized and tagged.

Concept Tagging

What is it:

AlchemyAPI employs sophisticated text analysis techniques to concept tag documents in a manner similar to how humans would identify concepts. The concept tagging API is capable of making high-level abstractions by understanding how concepts relate, and can identify concepts that aren't necessarily directly referenced in the text.

How it works:

if an article mentions CERN and the Higgs boson, it will tag Large Hadron Collider as a concept even if the term is not mentioned explicitly in the page. By using concept tagging you can perform higher level analysis of your content than just basic keyword identification.



Relationship Extraction

What is it:

Relations are the subject, action and object relations within sentences.

AlchemyAPI's relation extraction API is capable of parsing sentences into subject, action and object form and then adding additional semantic information such as entity extraction, keyword extraction, sentiment analysis and location identification

How it works:

Relation extraction can be used to automatically identify buying signals, key events and other important actions



The screenshot shows a news article headline: "China Willing to Buy Bonds From Debt-Crisis Nations". To the right, the AlchemyAPI interface displays extracted semantic relations:

- SUBJECT:** China (country)
- ACTION:** willing to buy (positive sentiment)
- OBJECT:** Bonds from debt-crisis nations

At the bottom right of the interface, it says "Fact / Relation Extraction".

Taxonomy

What is it:

AlchemyAPI automatically categorizes your text, HTML or web-based content into a hierarchical taxonomy. Using complex statistics and natural language processing technology, the taxonomy API can classify your content into its most likely topic category up to five levels deep.

/finance/personal finance/lending/credit cards
/finance/personal finance/lending/home financing
/finance/personal finance/lending/personal loans
/finance/personal finance/lending/student loans
/finance/personal finance/lending/vehicle financing

How it works:

Deeper levels allow you to classify content into more accurate and lucrative subsegments. For instance, an application focused on identifying content discussing personal lending practices can narrow its classification into sub topics that target decisions with finer resolution.

Language Detection

What is it:

provides a robust language detection facility capable of detecting the language of any text, HTML or web-based content.

AlchemyAPI identifies more languages than any other text analysis service at extremely high rates of accuracy.



How it works:

With language detection, you can easily categorize or filter any content based on the language it was written in.

Text Extraction

What is it:

Can automatically extract the important information from a webpage, removing navigation links, advertisements and other undesired content. Use AlchemyAPI's text extraction API to just focus on the key text to improve website indexing, increase contextual advertising relevancy and simplify analysis.

How it works:

Text extraction can return the embedded links within the important content, which makes it possible to use for web crawling applications.

The screenshot shows a news article from CNNMoney.com titled "Nasdaq and S&P 500 at '09 highs". The page includes a summary, author information, and a "Quick Vote" poll. Three orange arrows point to specific text elements: one arrow points to the main headline, another to a paragraph about stocks ending at 11-month highs, and a third to a section titled "Quick Vote". A large callout box at the bottom right is labeled "Web Page Cleaning / Text Extraction".

Nasdaq and S&P 500 at '09 highs

Stocks stage a rally, with banks and techs among the big gainers. Apple slips. Beige Book says economy continues to stabilize.

By Alexandra Tait, CNNMoney.com senior writer
Last Updated: September 9, 2009: 6:17 PM ET

NEW YORK (CNNMoney.com) -- Stocks rallied Wednesday, with the Nasdaq and S&P 500 ending at 11-month highs as investors welcomed a Federal Reserve report that indicated the economy is stabilizing.

The Dow Jones industrial average ([INDU](#)) gained 50 points, or 0.5%, ending just short of a 10-month high.

The S&P 500 ([SPX](#)) index gained 8 points, or 0.8%, ending the session at an 11-month high.

Quick Vote

How has Wall Street responded to last year's collapse of Lehman Brothers?

Made significant changes
 Some reform, but more needed
 Business as usual
 It's gotten worse

[VOTE](#) or [View results](#)

Web Page Cleaning / Text Extraction

Microformats Parsing API

What is it:

Microformats are included in the HTML of webpages to add semantic information. These microformats allow the webpage to be more easily scanned and processed automatically through software. They are typically used for contact information, geographic coordinates, license information and similar information. AlchemyAPI's microformat parsing API can automatically detect and parse the microformats embedded within a webpage.



How it works:

Use microformat parsing to enhance webpage categorization and indexing and to perform content discovery tasks.

Feed Detection

What is it:

Feeds are often embedded into websites to allow visitors and automated feed readers to access syndicated content. AlchemyAPI's feed detection API can find the feeds within webpages and return the links.



How it works:

Use feed detection to discover new content, including blog posts, news articles and comment streams

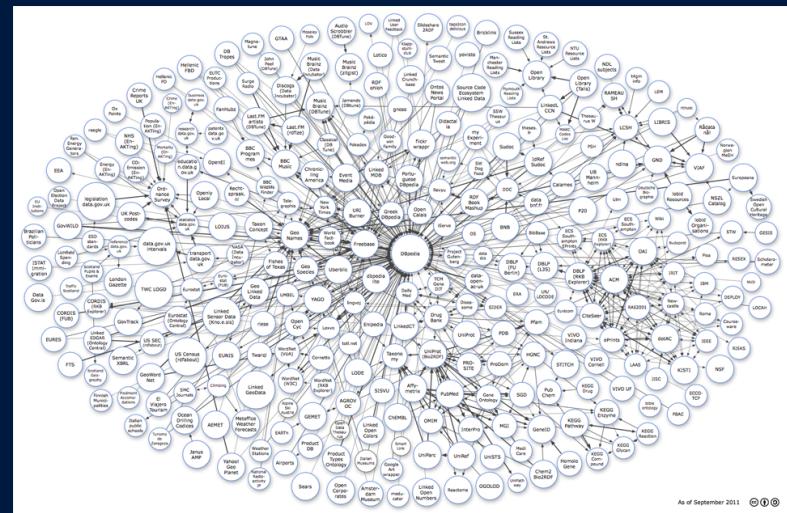
Linked Data

What is it:

Linked Data is a method of exposing, sharing and connecting data on the web via dereferenceable URIs. Linked Data aims to extend the Web with a data commons by publishing various open datasets as RDF on the Web and by setting RDF links between data items from different data sources

How it works:

if Apple, Inc. is identified as an entity in your content, using Linked Data makes it possible to get the following information: number of Apple employees, number of worldwide Apple locations, or last year's Net Operating Income. If AlchemyAPI finds a member of Congress in the content, linked data can access his or her picture, birth date, party affiliation, alma Mater or successor. The possibilities are endless.



Tone Analyzer

What is it?

The Tone Analyzer service uses linguistic analysis to detect emotional tones, social propensities, and writing styles in written communication. Then it offers suggestions to help the writer improve their intended language tones.

Why is it unique?

Provides user with three tones (Emotional, Social and Writing tone) allowing a user to refine a message on three dimensions

How does it work?

Takes input as written text in English and provides output of the three tones as a JSON file.

Example Use Cases

- Call Centers - Chat
- Personal and Business Communication

Analysis Results

Score Metric: Percentile Count

Emotion Tone (47%)

Social Tone (22%)

Writing Tone (29%)

Anger (99%) Negative (99%)

Cheerfulness (41%)

Agreeableness (98%) Conscientiousness (12%)

Analytical (82%) Confident (68%)

Tentative (0%)

Hi Team,

I know the times are difficult! Our sales have been disappointing for the past three quarters for our data analytics product suite. We have a competitive data analytics product suite in the industry. But we need to do our job selling it!

We need to acknowledge and fix our sales challenges. We can't blame the economy for our lack of execution! We are missing critical sales opportunities. Our product is in no way inferior to the competitor products. Our clients are hungry for analytical tools to improve their business outcomes. Economy has nothing to do with it. In fact, it is in times such as this, our clients want to get the insights they need to turn their businesses around. Let's buckle up and execute.

In summary, we have a competitive product, and a hungry market. We have to do our job to close the deals.

Jennifer Baker

* Click highlighted words to show revision suggestion.

We have a competitive data analytics product suite in the industry. But we need to acknowledge and fix our sales challenges. We can't blame the economy for our lack of execution! We are missing critical sales opportunities. Our product is in no way inferior to the competitor products. Our clients are hungry for analytical tools to improve their business outcomes. Economy has nothing to do with it. In fact, it is in times such as this, our clients want to get the insights they need to turn their businesses around. Let's buckle up and execute.

In summary, we have a competitive product, and a hungry market. We have to do our job to close the deals.

Jennifer Baker
Sales Leader, North-East Geo,
Data Analytics Inc.

Suggested synonyms for improve :

openness	conscientious	agreeable
help		
change		
build up		
pretty		
furbish up		

Close

Relationship Extraction

What is it?

Intelligently finds relationships between nouns, verbs, subjects, objects, etc.

How does it work?

Parses sentences into their various components and detects relationships between the components.

Use Cases-

News article analysis to extract relevant people, organization, event type, date/time, or location

The United States House of Representatives is one of the two houses of the United States Congress (a bicameral legislature). It is frequently referred to as The House. The other house is the Senate.

The composition and powers of the House are established in Article One of the United States Constitution. The major power of the House is to pass federal legislation that affects the entire country, although its bills must also be passed by the Senate and further agreed to by the U.S. President before becoming law (unless both the House and Senate re-pass the legislation with a two-thirds majority in each chamber). The House has some exclusive powers: the power to initiate revenue bills,[1] to impeach officials (impeached officials are subsequently tried in the Senate),[2] and to elect the U.S. President in case there is no majority in the Electoral College.[3]

Each U.S. state is represented in the House in proportion to its population as measured in the census, but every state is entitled to at least one representative. The most populous state, California, currently has 53 representatives. On the other end of the spectrum, there are seven states with only one representative each (Alaska, Delaware, Montana, North Dakota, South Dakota, Vermont, and Wyoming). The total number of voting representatives is fixed by law at 435.[4] Each representative serves for a two-year term. The Speaker of the House, who presides over the chamber, is elected by the members of the House, and is therefore traditionally the leader of the House Democratic Caucus or the House Republican Conference, whichever party has more voting members. The House meets in the south wing of the United States Capitol.



GPE EVENT_COMMUNICATION PEOPLE ORGANIZATION TIME PERSON FACILITY
CARDINAL LOCATION DATE EVENT VIOLENCE

P Ukraine said that dozens of pro-Russian separatists were killed in fighting around a regional airport that continued for a second day on Tuesday, forcing schools to close and residents to flee.
P Rebel fighters took over Donetsk International Airport early Monday, prompting the military to deploy helicopters, fighter jets and paratroopers to regain control of the main terminal.
P The Journal's reporters have been posting photos to social media from Ukraine as the country has fallen into turmoil.
P See the photos.
P Follow the continuing conflict in and around eastern Ukraine.
P "The airport is under our full control," Interior Minister Arsen Avakov said on Tuesday.
P "The enemy suffered serious losses and we have lost none."
P He estimated that dozens of separatist fighters had been killed, and said the combat operation was continuing to drive out the remnants of the pro-Russian forces.

PERSON

Visual Recognition

What is it?

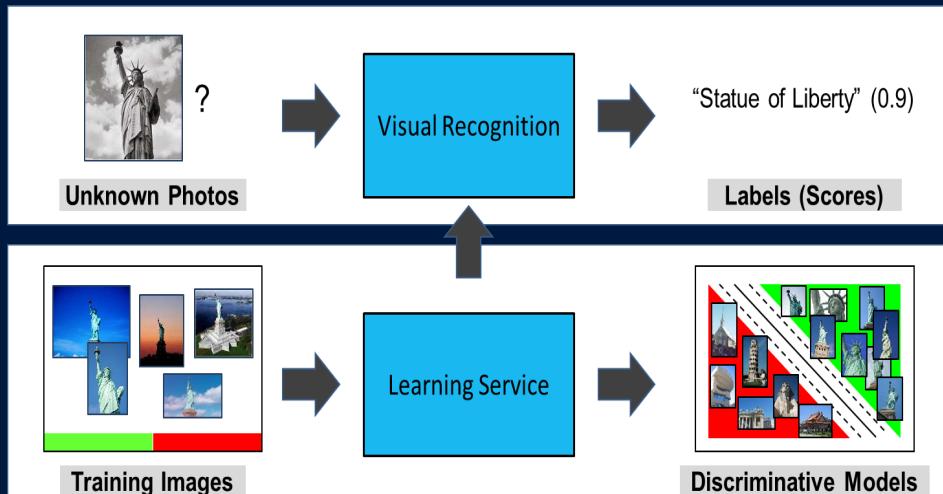
Analyzes analyzes the visual appearance of images or video frames to understand what is happening in a scene.

How does it work?

Includes an unmatched number of preset classifier and trained labels (2,000+), a taxonomy that recognizes 150+ different sports, and can ingest 1,000+ batch images with the ability to recognize multiple labels in a picture.

Example Use Cases

- Audio-visual indexing and search of media archive
- Automatic “Smart Album” generation
- Marketing data analysis from social media - For e.g., mine Pinterest images and perform segmentation



Visual Insights

What is it?

Visual Insights analyzes photos and video to provide insight into consumers' *interests, activities, hobbies, life events, and products.*

Why is it unique?

While most image services work on an image-by-image basis, this service works on a large collection of images.

How does it work?

Visual Insights analyzes a collection of images and outputs the interests, activities, etc. found in them, expressed as percentages.

Example Use Cases

- Brand Consistency Across Channels
- Customer Segmentation & Personalized Marketing
- Social Media Campaign Analysis



Concept Expansion

What is it?

Maps euphemisms or colloquial terms to more commonly understood phrases

How does it work?

Analyses text and interprets its meaning based on usage in other similar contexts.

Use Cases-

Example: interprets “The Big Apple” as meaning “New York City”.

The screenshot shows a user interface for 'Concept Expansion Sample'. On the left, there's a form with fields for 'Label' (set to 'drugs'), 'Corpus' (set to 'Medical Transcriptions' with the URL <http://www.mtsamples.com>), and 'Seeds' (containing 'motrin', 'tylenol', and 'aspirin'). A 'Submit' button is located below the seeds field. A large blue arrow points from the 'Output:' section on the right towards the 'Seeds' field. The 'Output:' section is divided into two columns: 'Prevalence' (listing numbers from 24 down to 5) and 'Result' (listing various medical terms and abbreviations). The 'Result' column includes entries like 'multivitamin daily , aspirin', 'tricor 145 mg daily , aspirin', 'penicillin', 'ability 5 mg daily , motrin', 'venom - bee / wasp', 'adhesive tape', 'aspirin , plavix', 'aspirin one tablet daily , tylenol', 'hydrocodone / acetaminophen tablets', 'and motrin', 'insulin sliding scale , tylenol', 'aricept 5 mg daily , tylenol', 'oxazepam 15 mg daily , tylenol', 'a beta blocker , aspirin', 'nkda . medications : tylenol', 'plenty of fluids . tylenol', 'antiinflammatories or aspirin', '2 . tylenol', 'd . 2 . tylenol', 'lasix on a', 'none . medications : tylenol', 'plan : 1 . aspirin', 'aspirin . dr', 'sublingual nitro', 'lunesta 2 mg', '5 . aspirin', 'motrin , lotensin', 'and aspirin', 'advair 250 as needed , aspirin', 'ibuprofen', 'd . 5 . aspirin', 'he may see dr . xyz', 'daily . 17 . aspirin', 'tylenol . now resolved . 2', 'tylenol . now resolved', 'plan : 1 . motrin', and 'cardura'.