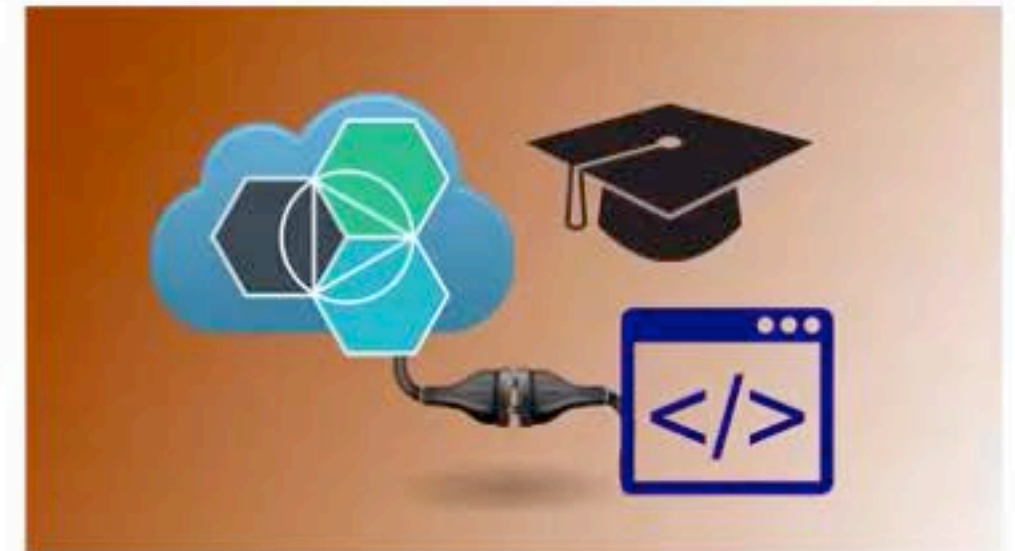


Alchemy API

Learning Objectives:

1. Watson & Cognitive Services
2. Use of Alchemy API in analytics

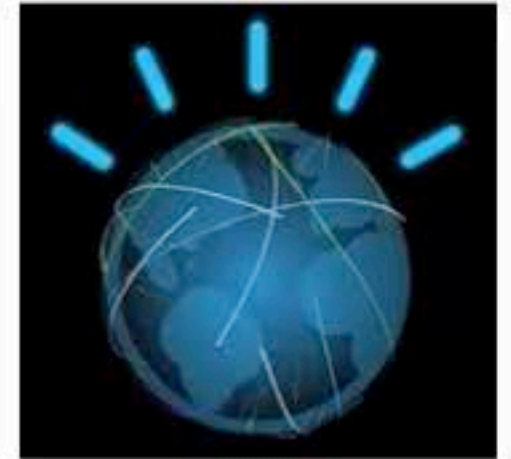


AlchemyAPI
IBM



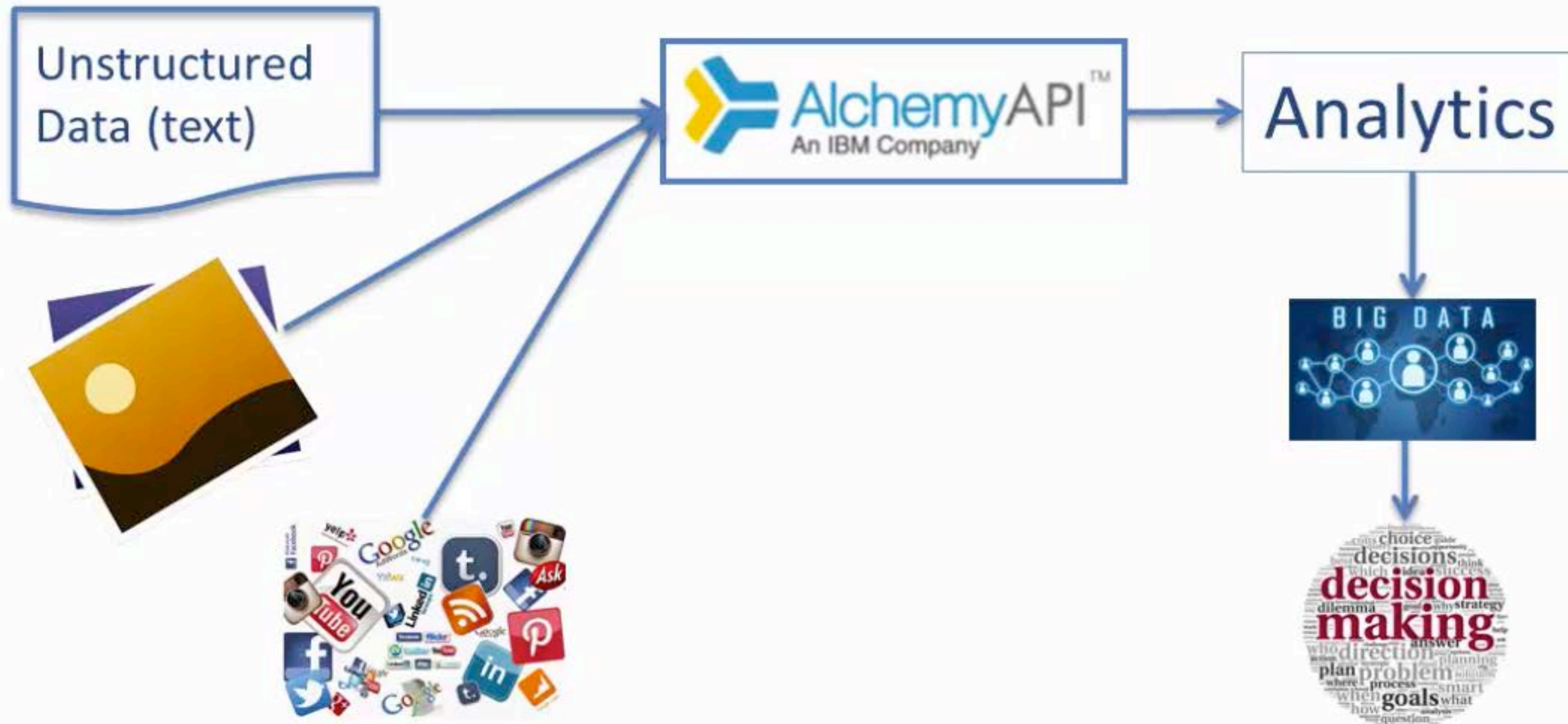
Cognitive Services

- IBM Watson is a question answering computer system capable of answering questions posed in *natural language*
- Cognitive services refers to a capability to provide answers based on what the underlying system knows to be correct, and relies on information they acquire over time



Alchemy API – Big Picture

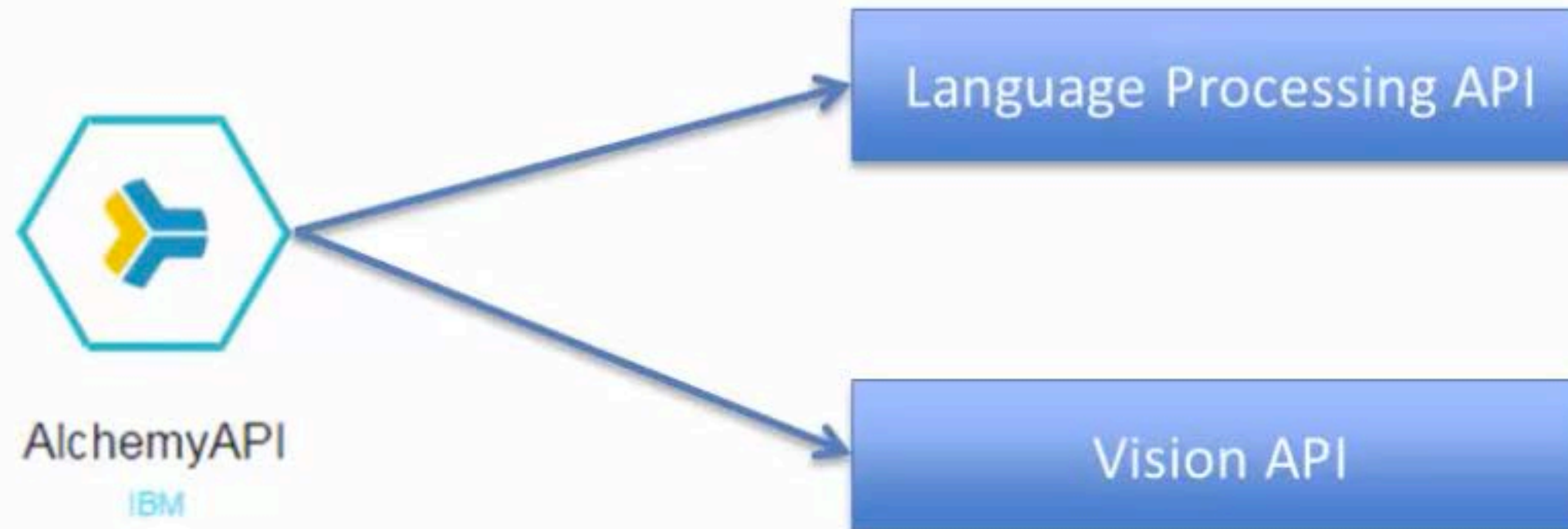
<http://www.alchemyapi.com/>



Alchemy API

<http://www.alchemyapi.com/>

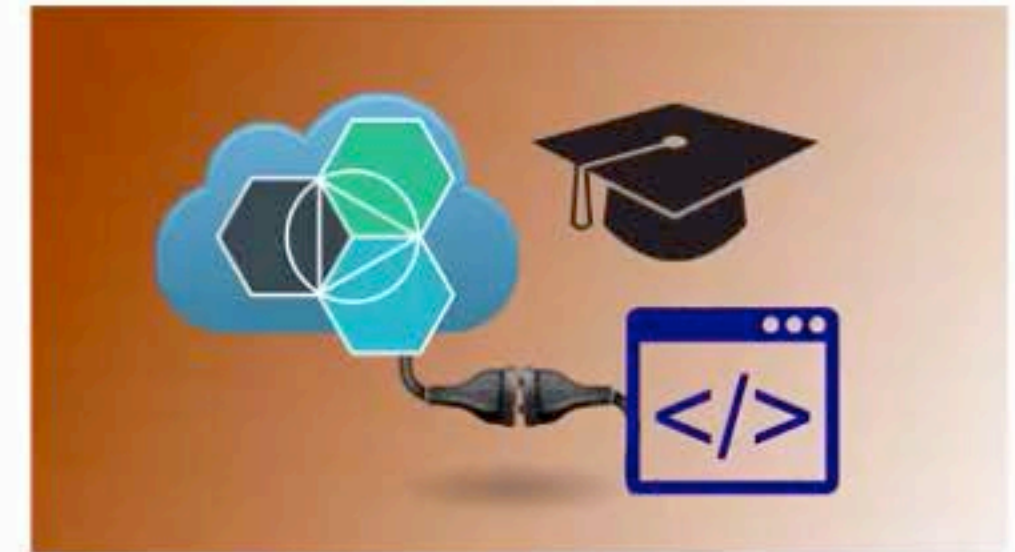
- Alchemy API is available as a managed service on Bluemix platform



Language Processing

Learning Objectives:

1. Introduction to Language Processing
2. Alechemy API Language Processing functions



AlchemyAPI
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Alchemy API – Natural Language Processing

<http://www.alchemyapi.com/>

- Uses natural language processing technology and machine learning algorithm to extract meta-data from content
 - People
 - Places
 - Companies
 - Topics
 - Facts
 - Relationships
 - Authors
 - Languages



Language Processing - API

<http://www.alchemyapi.com/>

Entity Extraction

Relation Extraction

Text Extraction

Sentiment Analysis

Taxonomy
Classification

Feed Detection

Keyword Extraction

Author Extraction

Microformat Parsing

Concept Tagging

Language Detection

Linked Data Support

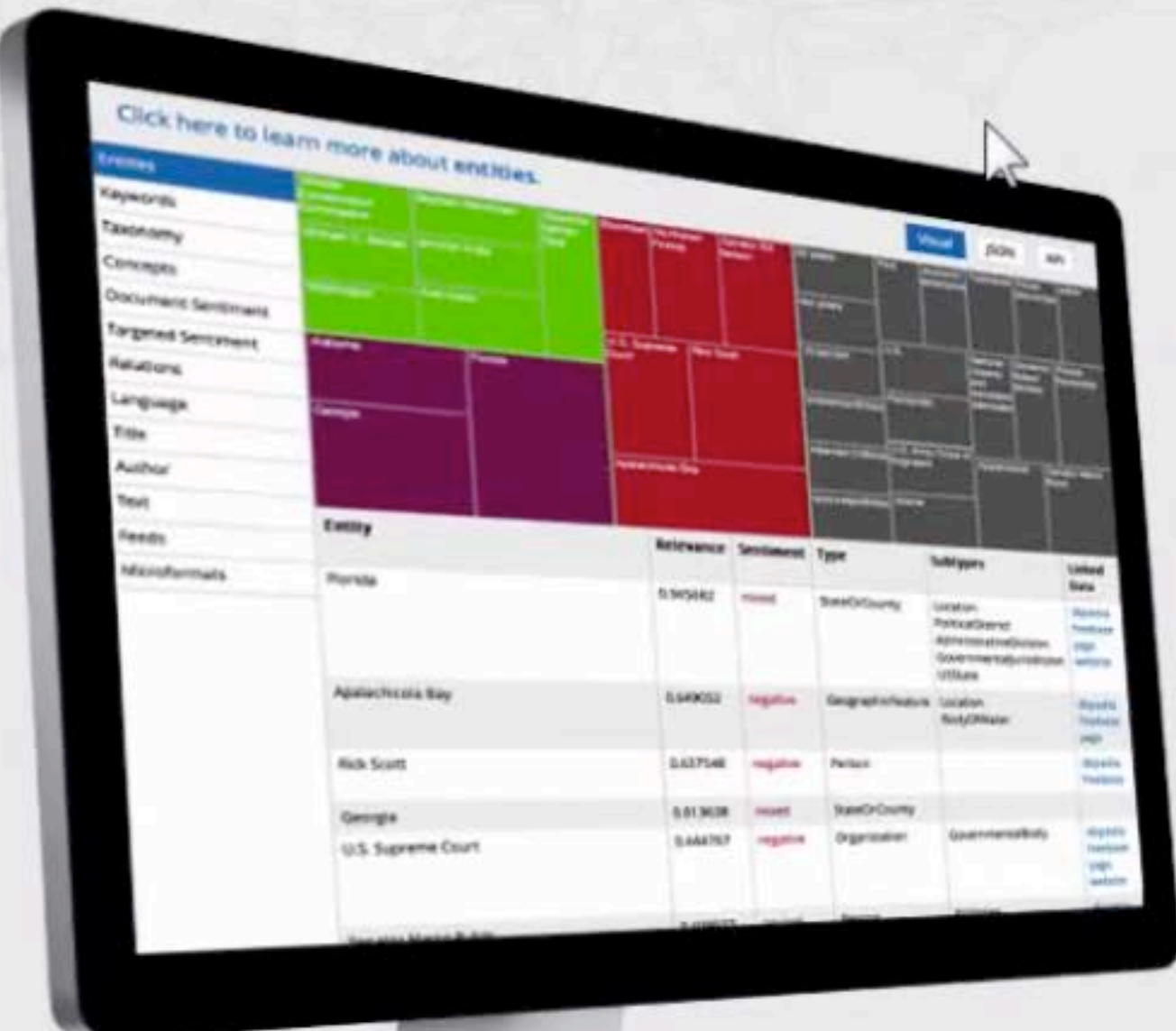


Dashboard - IBM Bluemix x AlchemyAPI | Powering the x IBM - United States x

www.alchemyapi.com

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An IBM Company

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Click here to learn more about entities.

Entity	Relevance	Sentiment	Type	Subtypes	Linked Data
Florida	0.905162	mixed	StateOrCounty	Location PoliticalDistrict AdministrativeDivision GovernmentalJurisdiction Office	Wikipedia Facebook Twitter
Apalachicola Bay	0.549052	negative	GeographicalFeature	Location BodyOfWater	Wikipedia Facebook Twitter
Rick Scott	0.637548	negative	Person		Wikipedia Facebook Twitter
Georgia	0.613608	mixed	StateOrCounty		Wikipedia Facebook Twitter
U.S. Supreme Court	0.666767	negative	Organization	GovernmentalBody	Wikipedia Facebook Twitter

Build Smarter Apps With AlchemyLanguage

12 Semantic Text Analysis APIs Using Natural Language Processing

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Try the AlchemyLanguage API

Load a URL or paste some text below.

Free API Key*Get Started with AlchemyAPI Today!*

Load a sample URL
click for a new web page

Load a text sample
click for a new text passage

Enter your own URL
click to clear URL field

Enter your own text
click to clear text field

Enter your own API Key

Try it



code high new use cases and drive innovation in business with cloud-native Python or cognitive computing as your decision support system. Our developer cloud is made with code and docs. Discover patterns and meaning in data on your own with guided analytics. Make data driven predictions that empower smarter decisions, solutions and improved outcomes. Start building your app for free now and leave the infrastructure to us. Gain greater insights so you can innovate faster. Control of your cloud should belong to you. SoftLayer can help. Create intelligent engagement with customers, partners and suppliers. Develop, deploy and deliver trusted mobile experiences. Prevent, detect and respond to threats to enterprise systems and data. Put the power of cognitive computing to work for you. Get help today for the IBM services and software you own. Find answers quickly in official IBM product documentation. Complimentary step-by-step guides for development and mobile.

[Click here to learn more about entities.](#)

Visual

JSON

API

Entities	developer		Dario Gil		official	
Keywords						
Taxonomy						
Concepts						
Document Sentiment						
Targeted Sentiment	decision support system				IBM	
Relations						
Language						
Title						
Author						
Text						
Feeds						
Microformats						

Functions

Entity Extraction

- Identify the proper nouns
People, Companies, Locations....

Sentiment Analysis

- Aims to determine the attitude of a speaker or a writer with respect to some topic



New product mentions
Blogs, Tweets, Postings...



Sentiment analysis



Marketing
Product Management



Functions

Keyword Extraction

- Extract the important words in the text



Concept Tagging

- Identify the overall concepts in the text



Functions

Relation Extraction

- Extract subject-action-object relations

ABC Inc. has raised
\$2M for the futuristic
hover-board project



ABC Inc. has raised \$2M

Taxonomy Classification

- Categorizes content into a hierarchical taxonomy

E.g., Automatic classification of web sites

Careers &
opportunities related
text



careers
❖ career advice
❖ career planning
❖ job fairs
❖ job search
❖ nursing
❖ resume writing and advice
❖ telecommuting
❖ u.s. military



Functions

Author Extraction

- Extract the author of Blog/posts/articles

Language Detection

- Detects 97+ languages

Text Extraction

- Extracts text out of web pages
 - Improve web page indexing
 - Simplify analysis
 - Improve relevancy of advertisements



Functions

Feed Detection

Microformat Parsing

- Finds RSS/Atom feeds in web pages
- New content discovery
- Microformats are included in HTML for adding semantic information on web pages
 - Contact information
 - Geographic coordinates
 - License information
- Alchemy API automatically detects and parses the microformats



Functions

Linked Data Support

- The Semantic Web is a Web of Data that can be queried , used for drawing inference
- The data for semantic web is managed in a format known as linked data
- Alchemy API supports Linked Data in the web thereby exposing, sharing, and connecting pieces of data, information, and knowledge



Summary

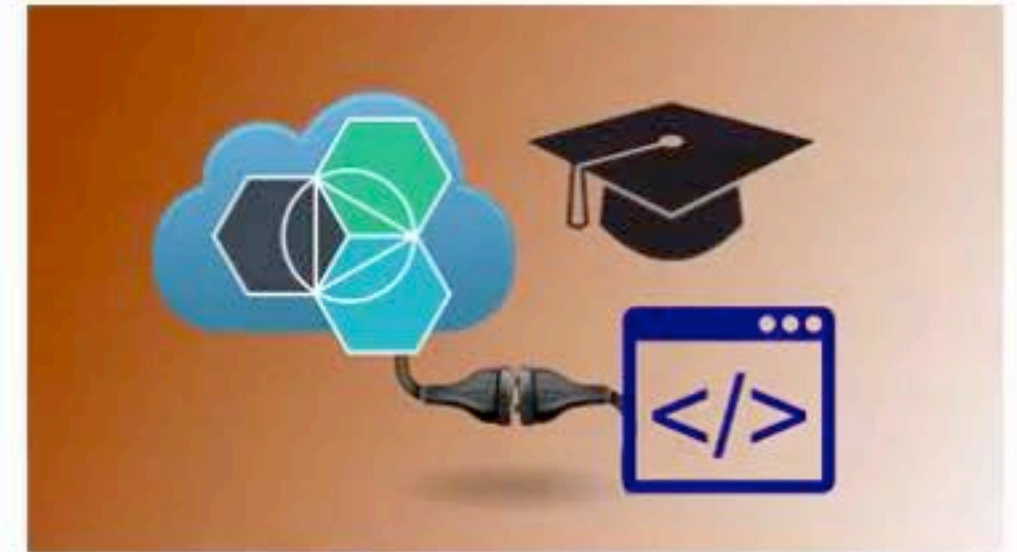
- Language processing API may be used for processing of unstructured data
- Alchemy API managed service provides various functions that can be leveraged by applications to automate analysis of unstructured data that has traditionally required human intervention



Vision API

Learning Objectives:

1. Alchemy Vision API functions
2. Use of vision API



AlchemyAPI
IBM



Alchemy API - Vision

<http://www.alchemyapi.com/>



- Uses deep learning technology to understand a picture's content and context. These API may be used for effectively integrate images as part of big data analytics to make critical business decisions

Image Link
Extraction

Image Tagging

Face Recognition

<http://vision.alchemy.ai/>



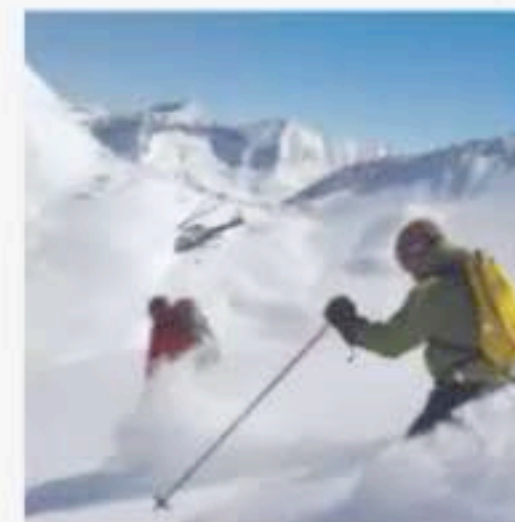
[Case Studies](#)[Try Our Demo](#)[Documentation](#)[Support](#)[Get a free API key](#)

Try Alchemy Vision Yourself

Drag your own media into this area or:

[Try It!](#)

Select an image from our gallery



Functions

Image Link Extraction

- Extracts the image link on internet accessible URLs and HTML



```
"url": "http://www.washingtonpost.com/wp-srv/special/lifestyle/the-age-of-obama/img/obama-v2/obama09.jpg",  
"totalTransactions": "5",  
"imageKeywords": [{ "text": "person", "score": "0.999697", "knowledgeGraph": { "typeHierarchy": "/people" } }]
```



Functions

Image Tagging

- Image tagging is a process by which a computer system **automatically** assigns metadata in the form of captioning or keywords to a digital **image**.



```
"imageKeywords": [  
  {  
    "text": "cat", "score": "0.998499",  
    "knowledgeGraph":  
      { "typeHierarchy": "/animals/pets/cat" }  
  }  
]
```



Functions

Face Recognition

- Performs face detection and recognition on your Internet-accessible URLs and posted image files



```
"imageFaces": [{  
  "age": {  
    "ageRange": "55-64",  
    "score": "0.447907"  
  },  
  "gender": {  
    "gender": "MALE",  
    "score": "0.99394"  
  },  
},
```



Summary

- Alchemy Vision API may be leveraged to analyze the images
- Metadata generated by vision API may be used as part of the big data analytics

