Course: Information Retrieval
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Team 7:

SKiIR

Explanation Retrieval

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Google's Nest to Buy Security Startup Dropcam for $555 Million

by Brian Womack

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June 21 (Bloomberg) -- Google Inc.'s Nest Labs is acquiring Dropcam Inc. for $555 million to boost its offerings for the connected home.

http://www.bloomberg.com/news/articles/2014-06-21/google-s-nest-buying-security-company-dropcam-for-555-million

Imagine

You are reading a newspaper about a new startup company that has been bought up by Google.

the world, an offering that would broaden Nest's product line-up into home security. Nest sells digital thermostats and smoke alarms that can also be checked and adjusted remotely from mobile gadgets.

"We care very deeply about helping people stay connected to their home, especially when they're not in their home," said Matt Rogers, co-founder of Nest, which is based in Palo Alto, California, in an interview. "This is another offering that helps people get insights into their home."

The purchase underlines how Nest, which Google bought for about $3.2 billion earlier this year, is working to become a bigger player of connected devices for consumers. The trend is part of a technology movement dubbed the "Internet of things," where more gadgets and everyday items are connected to the Web and can deliver data and be controlled by mobile devices.

The products gather data on consumer habits and usage. Privacy experts have questioned how Google, the world's largest search engine, would use Nest's data. Nest has said its information will remain separate from its parent company.

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Wow, did I miss something?!

What is **Nest**?

Why did Google buy it for **$3.2 billion** dollars?

And now they are buying another company for **$555 million** dollars?

And.. what is the **Internet of Things**?

.. where more gadgets and everyday items are connected to the Web and can deliver data and controlled by mobile devices.
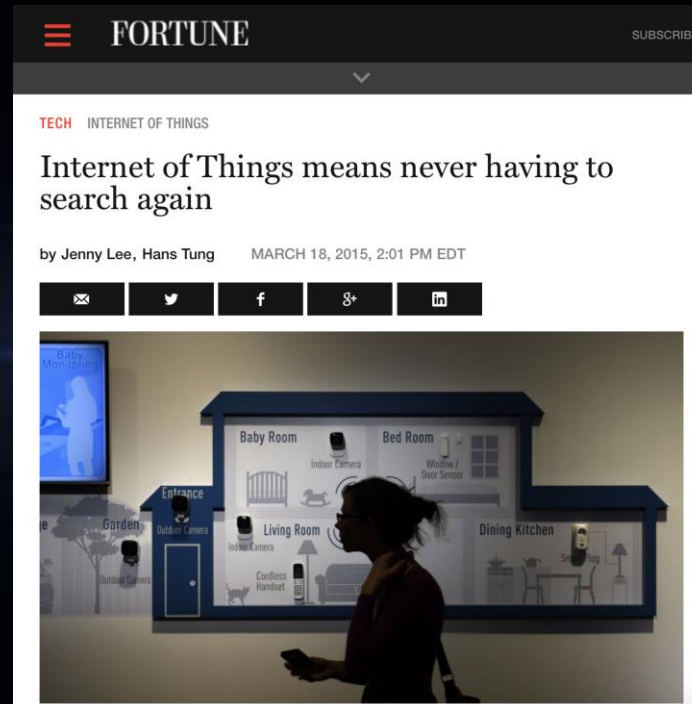
What would you do?

What is the **Internet of Things**?

Quit the article?!

What would you do?

What is the **Internet of Things**?

Go to a competitor newspaper website?!

What would you do?

What is the **Internet of Things**?

Wouldn't it be nice if
someone could explain this
to you?

Internet of Things is that all user objects are embedded with software and are connected and interacting with each other.

"It's like that you can see on you iPhone what is in your fridge while your favorite music is played and lightning the candles automatically."

So, we have a problem

How can we…

- **prevent** you from **visiting** other news websites?

- let you **stay** on our news website?

- **broaden** the audience of our articles?

Wow, did I miss something?!

What is the **Internet of Things**?

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The products gather data on c Privacy experts have question use Nest's data. Nest has said company.

Kopiëren
Google doorzoeken op 'Internet of things'
Afdrukken…

➕ Can someone explain this?

Element inspecteren

Zoek op in Woordenboek
Spraak ▶

Zoek met Google
Voeg toe aan iTunes als gesproken track
New TextWrangler Document with Selection

*Wouldn't it be nice if **someone could explain this to you ONLINE**?*

Goal

To **broaden the audience** of our news website by

explaining 'complex' terms with online annotations.

- **Manual explanations**
  Readers explain terms that other readers don't understand

- **Automatic explanations**
  Retrieving related articles with semantic searching

But…
Human Computation is <u>scarce</u>!!

Solution

SKiIR

Explanation Retrieval

Powered by **TUDelft** Delft University of Technology

Design choices

SKiIR-app

Scope

Web Application

Chrome Extension

News articles

Bloomberg

Back-end & Database

Play Framework & PostGreSQL

Human Computation

Readers

IR Model

AlchemyAPI & DBPedia & *New learnings*
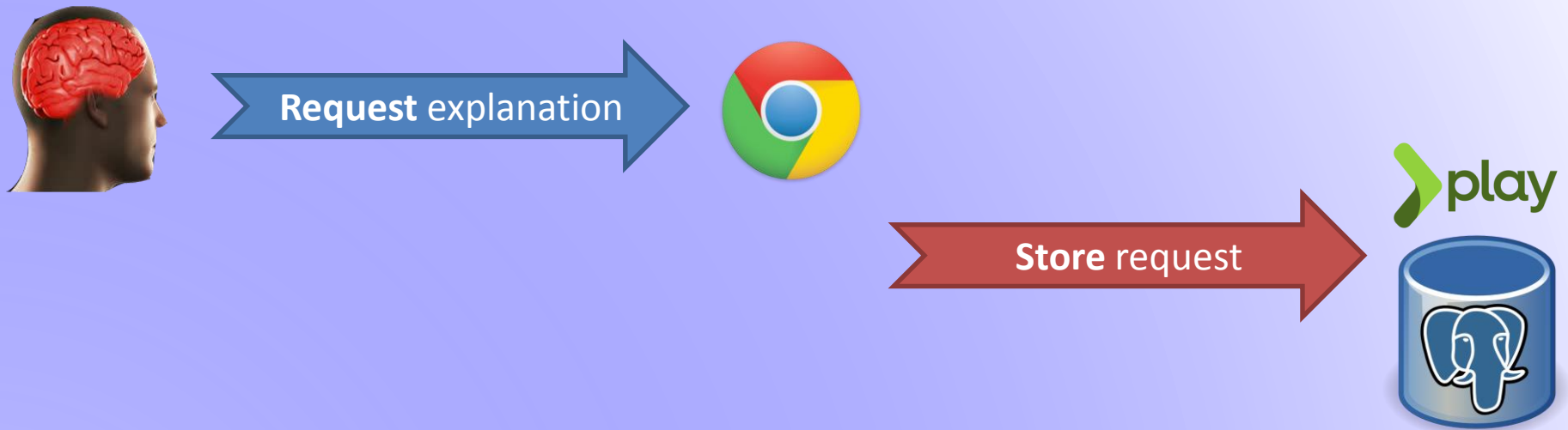
Features - What should it do?

1. **Request** explanation

2. **Semantically** retrieve explanations

1. **Provide** explanation

2. **Review** explanation

3. **Scrape** news articles

Workflow - How should it work?

1. **Request** explanation

Workflow - How should it work?

2. **Scrape** news articles
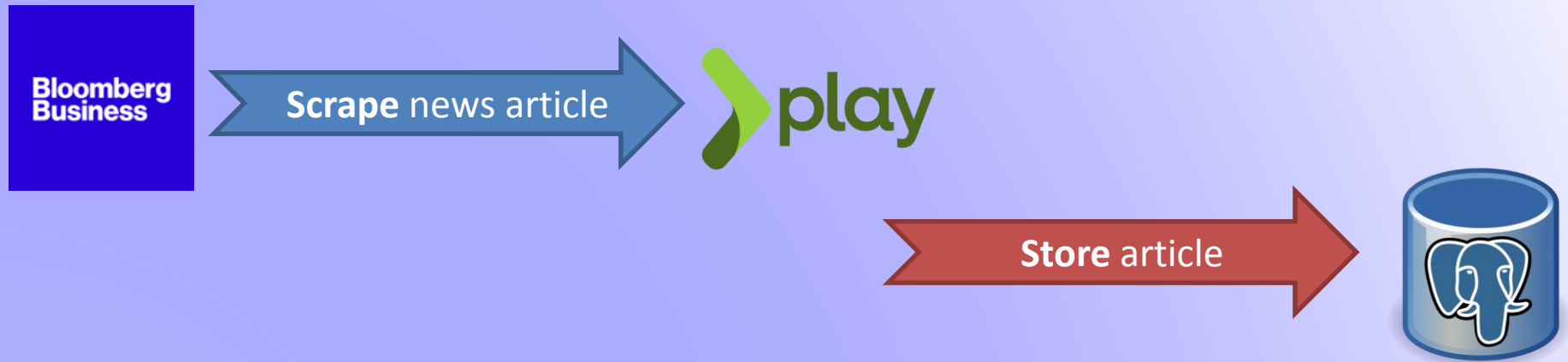
Workflow - How should it work?

3. **Provide** explanation - **manually**
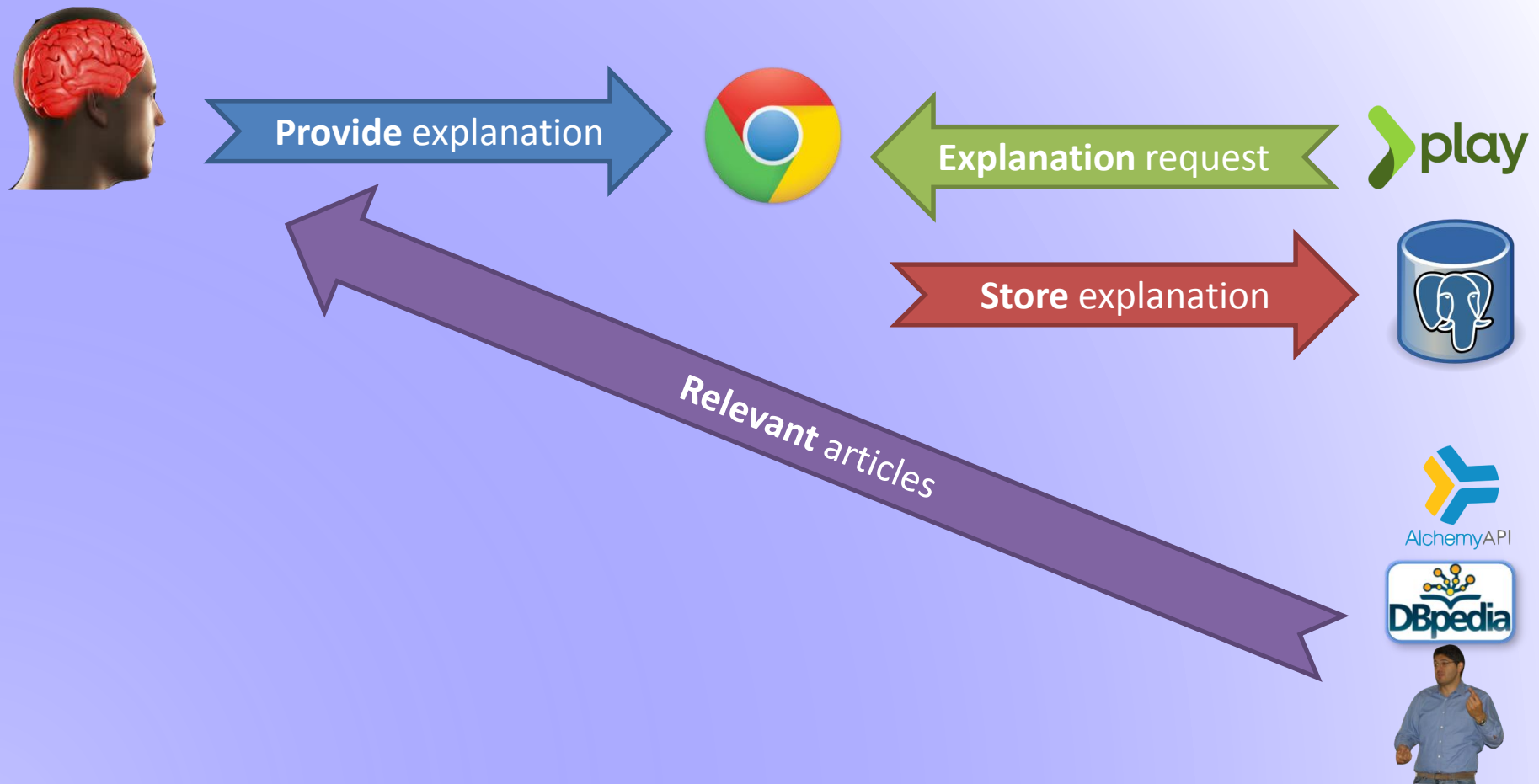
Workflow - How should it work?

4. **Semantically** retrieve explanation - **automatically**

Explanation request

Store explanation

Explanation from relevant articles
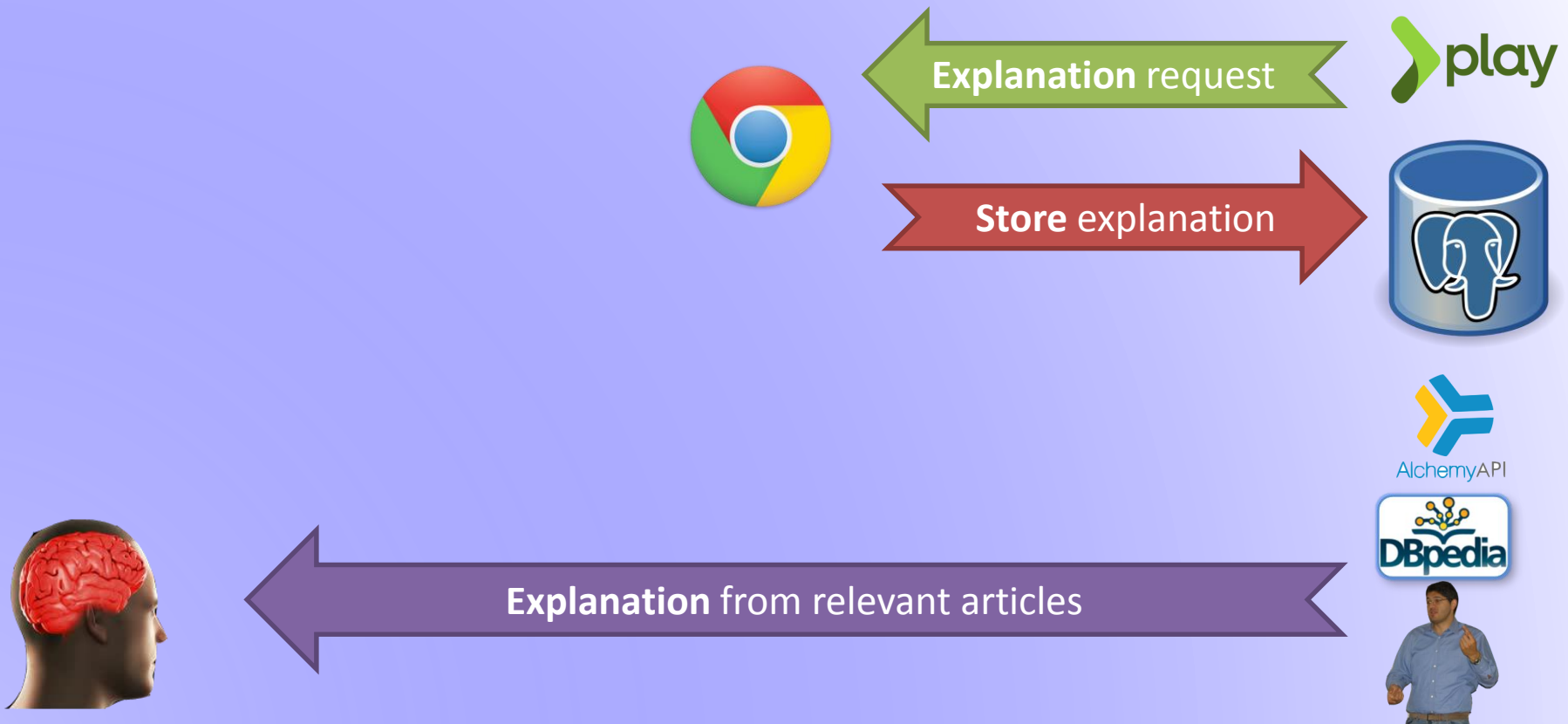
Workflow - How should it work?

5. **Review** explanation
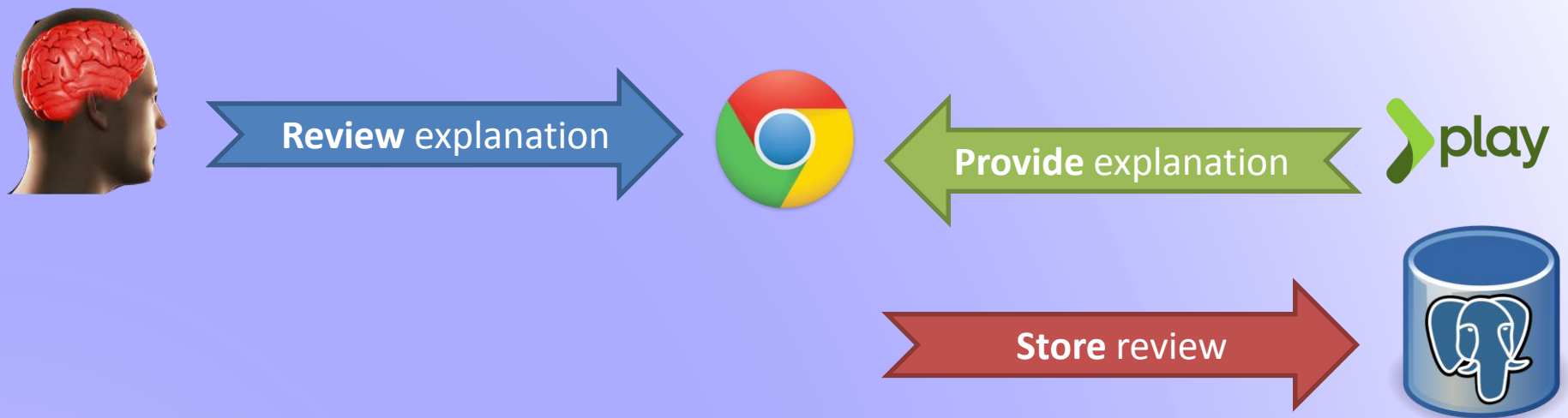
Workflow - Overview

Explanation Retrieval

1. Extraction of requisites

2. Relevance of terms

3. SCS Connector

4. Adding diversity

5. Ranking results

Extraction of Requisites
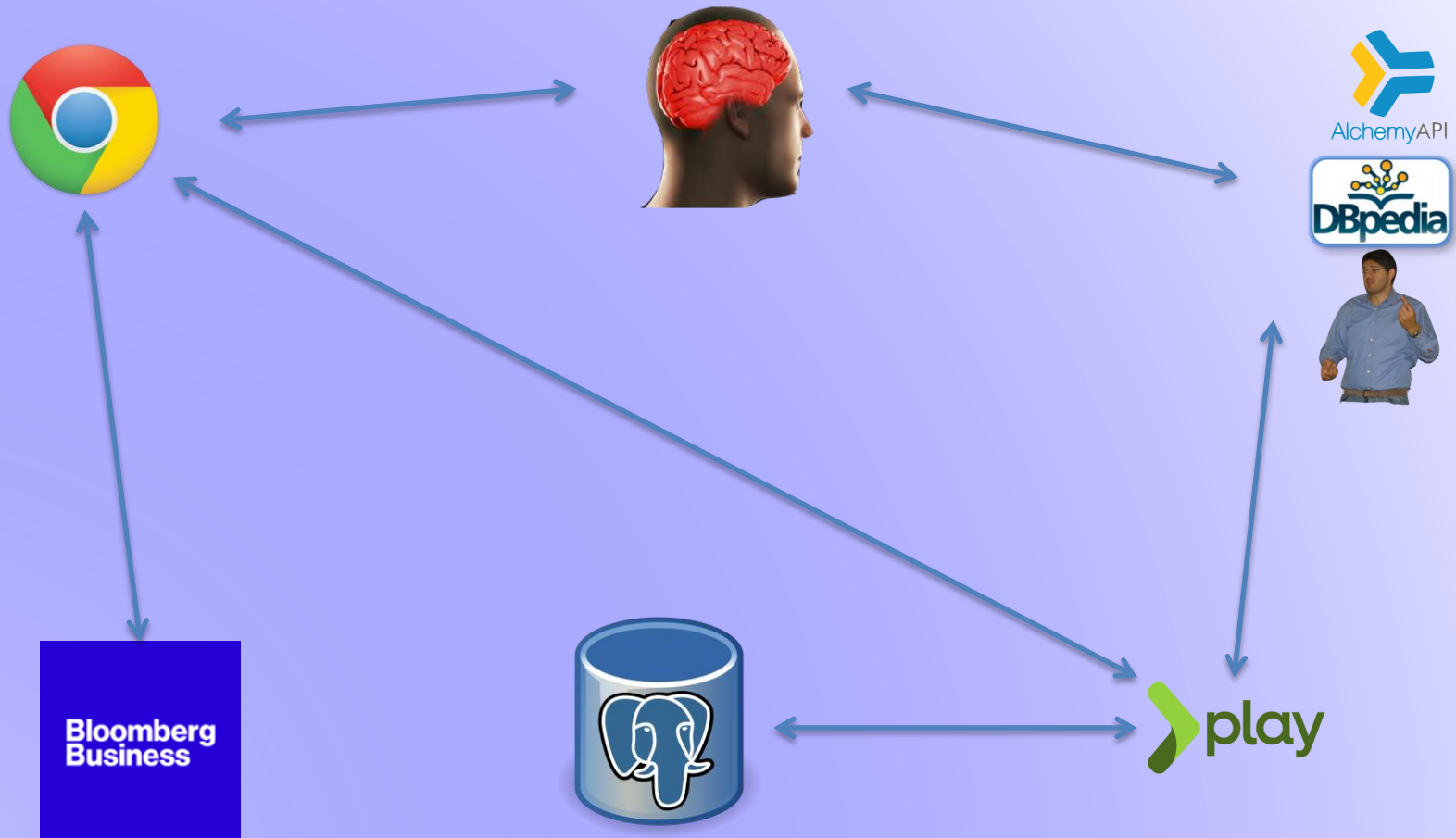
- Entities
- Concepts
- Type
- Linked Data
- Relevance - *borrowed*

Entity	Relevance	Sentiment	Type	Subtypes	Linked Data
Nest	0.840655	negative	Person		
Dropcam	0.362548	mixed	Person		
Google Inc.	0.356966	positive	Company	AcademicInstitution AwardPresentingOrganization OperatingSystemDeveloper ProgrammingLanguageDeveloper SoftwareDeveloper VentureFundedCompany	dbpedia freebase yago website
Nest Labs	0.311734	positive	Company		dbpedia freebase
Matt Rogers	0.311671	neutral	Person	MusicalArtist FootballPlayer TVPersonality TVActor	dbpedia freebase yago
Menlo Ventures	0.244707	positive	Company		dbpedia freebase
Dropcam Inc.	0.207606	positive	Company		

Concept	Relevance	Linked Data
Chief executive officer	0.91255	dbpedia freebase
Executive officer	0.840277	dbpedia freebase
Mountain View, California	0.784214	dbpedia freebase yago website
Silicon Valley	0.743894	dbpedia freebase yago
Facebook	0.691181	dbpedia freebase yago website
Yahoo!	0.689852	dbpedia freebase yago website

Source: AlchemyAPI

Relevance of terms

Relevance of terms in a specific **article**

0,35

Petrobras creditors could request an acceleration of payments on some of its debt if the company doesn't release an audited financial statement by the end of

0,63

Public prosecutors are investigating 20 companies, including 16 builders, for participating in a alleged cartel to overcharge the oil company. OAS and Galvao Engenharia SA, Brazilian construction companies, filed for bankruptcy after investigations started.

The president said the builders financial difficulties won't hold up planned tenders to build and operate infrastructure projects. She said she plans 0,11 nese investment for a railway linking Brazil's Atlantic coast with the Pacific Ocean

0,88

The Supreme Court has also authorized investigations of 49 politicians including Senate chief Renan Calheiros and lower house President Eduardo Cunha in relation to the alleged

0,78

kickbacks at Petrobras. Former official 0,63 company turned state's witness said that hundreds of millions of dollars went to political parties, including Rousseff Workers' Party The scandal has eroded the support she needs in Congress to approve austerity measures.

SCS Connector

Relationship between **entities**

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Adding Diversity

Maximal Marginal Relevance (MMR) method

Max Relevance   vs   Min Relevance

The company delayed in December reporting results for a second time as the board couldn't reach an agreement on the size of write-downs stemming from graft-related costs. Moody's Investors Service lowered Petrobras credit rating two levels to junk grade in February.

"I want to ensure that Petrobras goes back to the market," she said.

Petrobras creditors could demand accelerated repayment on some of its debt if the company doesn't release audited results by the end of May.

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Original document

Rousseff was rated good or very good by 23 percent of respondents, the lowest level since she took office in 2011 and the worst for any Brazilian leader since Fernando Henrique Cardoso in 1999, according to a Datafolha poll published Feb. 7 on the website of newspaper Folha de S. Paulo. The rating tumbled from 42 percent in December, the pollster said.

Most poll respondents said they thought Rousseff was aware of corruption at Petrobras while it was happening, even though she has publicly denied such knowledge. Prosecutors and police have alleged that company executives demanded bribes in return for approving inflated construction contracts. The scandal adds to frustration with a stagnating economy and diminishing water supplies in Sao Paulo, the country's biggest city.

"Petrobras is the main issue," Thiago de Aragao, a director at Brasilia-based political consulting firm Arko Advice, said by phone. "Despite all this, I don't think that the scandal will affect the government's ability to govern"

The government posted a budget deficit of 58.6 billion reais ($18.6 billion) in February, compared with a median forecast for a gap of 28 billion reais in a Bloomberg survey.

Finance Minister Joaquim Levy has said spending cuts and tax increases are fundamental to avoid a credit downgrade. He has pledged to boost the primary surplus, which excludes interest payments, to 1.2 percent of gross domestic product this year from a 0.64 percent deficit in 2014.

With that as a target, the government has already capped some spending by ministries and is awaiting congressional approval for tax increases and cuts in social welfare benefits such as unemployment insurance and pensions.

Standard & Poor's this month affirmed Brazil's investment grade status with a stable outlook as the country's sovereign credit rating stayed at BBB-, one level above junk. S&P said the government's measures to shrink the budget deficit was [...] to 6.7 percent of gross [...]

The correction will pave the way for stronger growth, S&P said, forecasting expansion of 2 percent for Latin's America largest economy next year following a 1 percent contraction in 2015.

Other results

The stock market was [...] benchmark Ibovespa [...] index's drop was led by [...] win a second term, which she did in October 2014.

While Petrobras stock recovered when Chief Executive Officer Maria das Gracas Foster stepped down Feb. 4, most gains were erased Feb. 6 when her replacement was named because of his state ties. Aldemir Bendine was CEO of state-controlled bank Banco do Brasil and a ruling party collaborator.

The stock slid 6.9 percent to 9.12 reai [...]

Once a symbol of Brazil's rising econ [...] plummeted this year to $43 billion, [...] Investors Services and Fitch Ratings [...] officials delayed plans to account for [...]

"The government prefers to play dow [...] "Despite all of this, the problem is sti [...]

To contact the reporter on this story: jlevin20@bloomberg.net

Ranking Results

Combining all to **rank** the articles on total **relevance**

- = Score of article
- = Relevance of term in article
- = Relevance of term in article
- = Multiplier for term being in selected paragraph
- = SCS score of term with respect to selected term(s)

Demonstration

See the application!

Reflection

What have we accomplished?

Recap of the things discussed

WHAT ELSE?