

MOZCON

2014

WELCOME!

Talking Back to Conversational Search



Justin Briggs • Getty Images

@justinrbriggs • justin.briggs@gettyimages.com

#MozCon

A person wearing a gas mask and a trench coat is sitting in a chair on a beach. It is raining heavily, and the sky is dark and cloudy. The person is wearing a gas mask with two circular lenses and a large circular filter. They are wearing a brown trench coat and dark pants. They are sitting in a green armchair. The beach is covered in wet sand and some debris. The sky is dark with some light breaking through the clouds. Rain is falling heavily, creating a sense of urgency and isolation.

Working in SEO







Matt Cutts ✓

@mattcutts

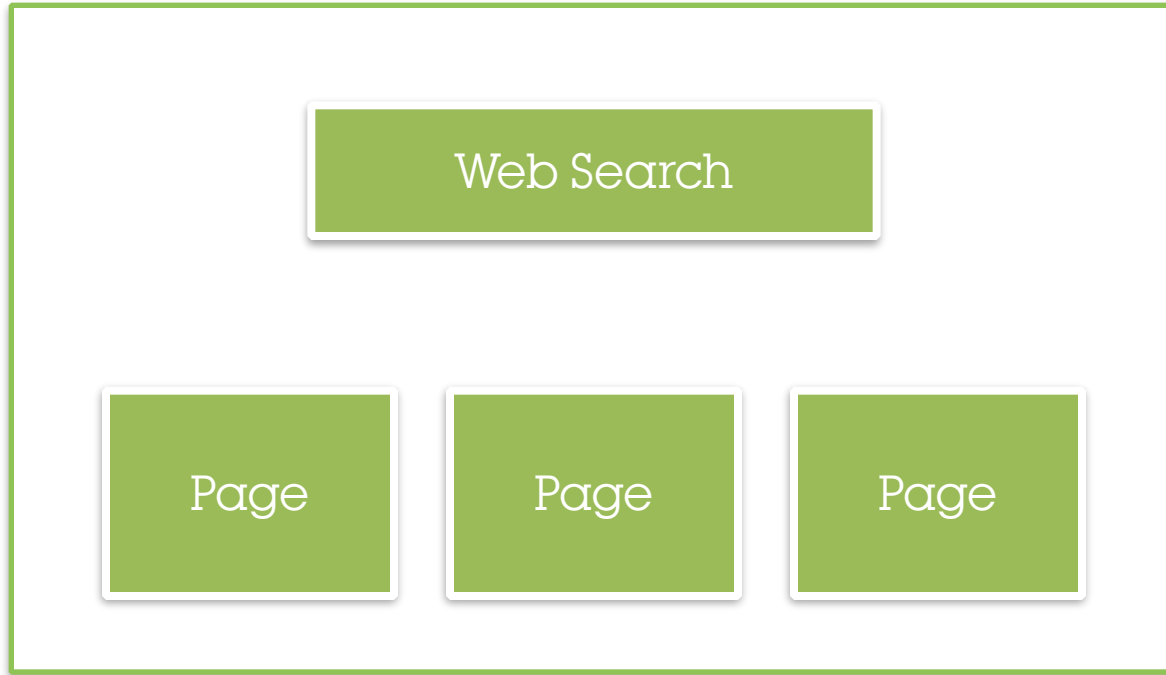
@dannysullivan conversational search, context, etc. It's just you and me and the SEOs sitting around talking penalties these days. :)





Exciting time for SEO





Search in web, against documents



“What is limburger”



“Play say it ain’t so”



“Schedule a meeting with Lynn”



“Navigate to grandma’s house”



These queries never touch the web

Search

Web

Email

Documents

Schema

Knowledge
Graph

Databases

Mobile
Apps

Applications

Search against capabilities



Breaking down strings

#1 Tokenization

#2 Parts of speech tagging

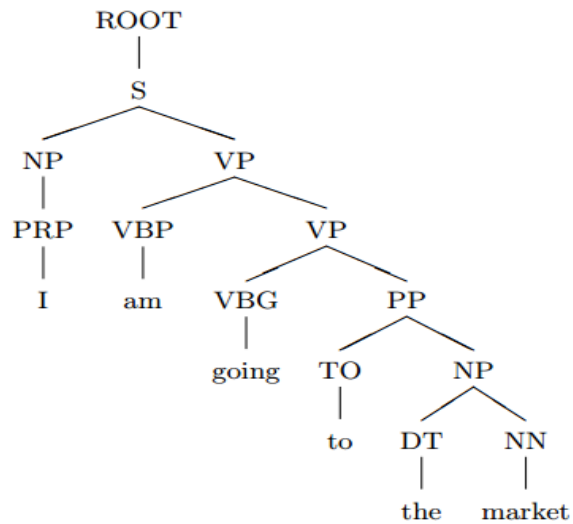
#3 Lemmatization

#4 Named entity detection

Understanding natural language

Who directed pulp fiction

#1 Tokenization



#2 Parts of speech tagging

Who directed pulp fiction

WP

VBD

NNP

WP: wh-pronoun

VBD: verb, past tense

NNP: noun, proper, singular

#2 Parts of speech tagging

am, are, is => be
car, cars, car's, cars' => car

#3 Lemmatization

Converting to canonical words

#3 Lemmatization



photos of Emma Watson

#4 Named entity detection

```
String tokens() =  
tokenizer.tokenize("An input sample sentence.");
```

```
"An", "input", "sample", "sentence", "."
```

opennlp.apache.org

Photos of Emma Watson

Photos of <START:person>Emma Watson<END>

opennlp.apache.org

who directed pulp fiction

Web

Videos

Shopping

Images

News

More ▾

Search tools

About 801,000 results (0.35 seconds)

Quentin Tarantino

Pulp Fiction, Director



Knowledge graph capability

`https://www.googleapis.com/freebase/v1/
mqlread?query={ <insert query here > }`

Replicate using mql

Question: Who directed the movie Pulp Fiction?

```
{  
  "/film/film/directed_by": ({  
    "/type/object/name": "pulp fiction",  
    "/type/object/type": "/film/film"  
  }),  
  "/type/object/name": ({}),  
  "/type/object/type": "/people/person"  
})
```

Strings to things

Answer: Quentin Tarantino

```
{
  "result": (
    {
      "!/film/film/directed_by": (
        {
          "/type/object/type": "/film/film",
          "/type/object/name": "Pulp Fiction"
        }
      ),
      "/type/object/type": "/people/person",
      "/type/object/name": (
        {
          "lang": "/lang/en",
          "type": "/type/text",
          "value": "Quentin Tarantino"
        }
      )
    }
  )
}
```

Answering queries without pages

1. Ask a question

Start by asking a question in natural language and watch the query generated:

Question: Who is the author of A Game of Thrones?

Ask

This query was generated for the question "Who is the author of A Game of Thrones?"

SPARQL EDIT

```
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX quepy: <http://www.machinalis.com/quepy#>
PREFIX dbpedia: <http://dbpedia.org/ontology/>
PREFIX dbpprop: <http://dbpedia.org/property/>
PREFIX dbpedia-owl: <http://dbpedia.org/ontology/>

SELECT DISTINCT ?x2 WHERE {
  ?x0 rdf:type foaf:Person.
  ?x0 foaf:name ?x2.
  ?x1 rdf:type dbpedia-owl:Book.
  ?x1 rdfs:label "A Game of Thrones"@en.
  ?x1 dbpedia-owl:author ?x0.
}
```

MQL EDIT

```
[{
  "!/book/written_work/author": [{
    "/type/object/name~": "A Game of Thrones",
    "/type/object/type": "/book/book"
  }],
  "/type/object/name": [{}],
  "/type/object/type": "/people/person"
}]
```

quepy.machinalis.com





Emma Watson / Getty Images

PICTURE PROFILE

Emma Watson



Emma Charlotte Duerre Watson is an English actress and model. She rose to prominence playing Hermione Granger in the Harry Potter film series, she was cast as Hermione at the age of nine, having previously acted only in school plays. She starred in all eight Harry Potter films, alongside Daniel Radcliffe and Rupert Grint. Watson's work on the Harry Potter series has earned her several awards and more than £10 million. She made her modelling debut for Burberry's autumn/winter campaign in 2009. In... [more](#)

Full Name: Emma Watson

Occupation: Actor

Birthdate: 15 Apr 1990 (age 23)

Birthplace: Paris, France

[Wikipedia / Freebase](#)

Embed these images [What is embed? →](#) | [View All Images →](#)



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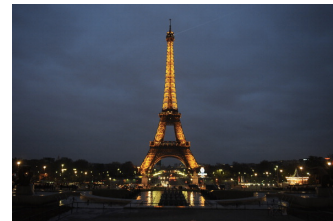


Newest [View All Images →](#)

Curating entity content



Emma Watson
Born: April 15, 1990 (age 24)
From: Paris, France



Attributes and connections



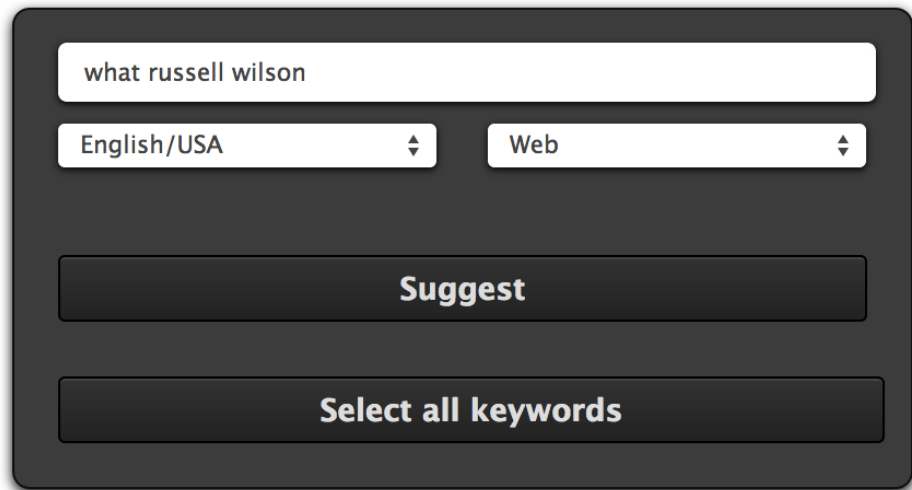
Which Brad Pitt?



Actor: actor, producer, Angelina Jolie, 1963, Fight Club

Boxer: martial arts, boxing, Olympics, 1981

Next level keyword targeting



A screenshot of a search interface. At the top is a text input field containing the query "what russell wilson". Below the input are two dropdown menus: the first is labeled "English/USA" and the second is labeled "Web". Below the dropdowns are two buttons: the top one is labeled "Suggest" and the bottom one is labeled "Select all keywords".

what russell wilson eats
what russell wilson nationality
what russell wilson will be doing tonight
what's russell wilson salary
what's russell wilson 40
what's russell wilson's nickname
what does russell wilson get paid
what is russell wilson enterprises inc
what is russell wilson jersey number
what is russell wilson net worth

Find common attributes by type

<Name> (# <Number>): <Position> for <Team> in <City>, <State>



Russell Wilson

Sign in to personalize

#3 QB | 5' 11", 206 lbs | Seattle Seahawks

Born Nov 29, 1988 in Richmond, VA (Age: 25)
Drafted 2012: 3rd Rnd, 75th by SEA
Experience 3 years
College Wisconsin

2013 Season

RAT	YDS	TD
101.2	3,357	26

Career

100.6	6,475	52
-------	-------	----

[Complete Stats »](#)

Go to
Russell Wilson ▼

Player Profile Stats Splits Game Log Videos Photos Shop

STATS

Dynamic targeting using entity attributes

Emma Watson Photos - News, Publicity, Event, & Premiere Pictures

Seattle Seahawks Photos - Team, Player, & Fan Pictures

Justin Bieber Photos - News, Concert, & Fan Pictures

Dynamic targeting using categories



rnews:ImageObject
or
rnews:VideoObject

rnews:datePublished
rnews:dateModified
rnews:expires
rnews:inLanguage
rnews:thumbnailURL

if available:
rnews:about {rnews:Storyline}

potentially:
rnews:sourceOrganization
rnews:genre

Search



Easy-access download
[View pricing](#)
[Add to cart](#)
[Add to lightbox](#)
[Print preview image](#)
[Download preview image](#)
[View terms of use](#)
[Search for more images like this](#)

Resources
• Choosing the right keywords (?)
• About our search features (?)
Chat is currently not available
• Questions? Please Contact Us.
[Live chat](#)

Title: **President Obama Delivers State Of The Union Address At U.S. Capitol**

Caption: **WASHINGTON, DC - JANUARY 28: U.S. President Barack Obama delivers the State of the Union address to a joint session of Congress as U.S. Vice President Joe Biden (L) and Speaker of the House U.S. Rep. Nancy Pelosi (R-CA) listen in the House Chamber at the U.S. Capitol on January 28, 2014 in Washington, DC. In his fifth State of the Union address, Obama is expected to emphasize on healthcare, economic fairness and new initiatives designed to stimulate the U.S. economy with bipartisan cooperation. (Photo by Alex Wong/Getty Images)**

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rnews:description

rnews:headline

rnews:identifier

rnews:dateCreated

rnews:creator

rnews:provider

rnews:height + rnews:width

Marking up schema

Schema takes you from web to data

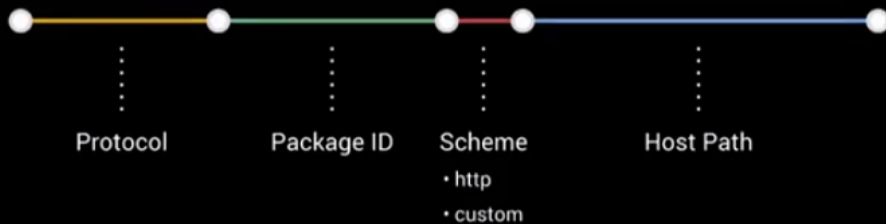
```
<script type="application/ld+json">
{
  "@context": "http://schema.org",
  "@type": "Person",
  "name": "John Doe",
  "jobTitle": "Graduate research assistant",
  "affiliation": "University of Dreams",
  "url": "http://www.example.com",
  "address": {
    "@type": "PostalAddress",
    "streetAddress": "1234 Peach Drive",
    "addressLocality": "Wonderland",
    "addressRegion": "Georgia"
  }
}
</script>
```

JSON-LD: JSON-based linked data format

App Indexing

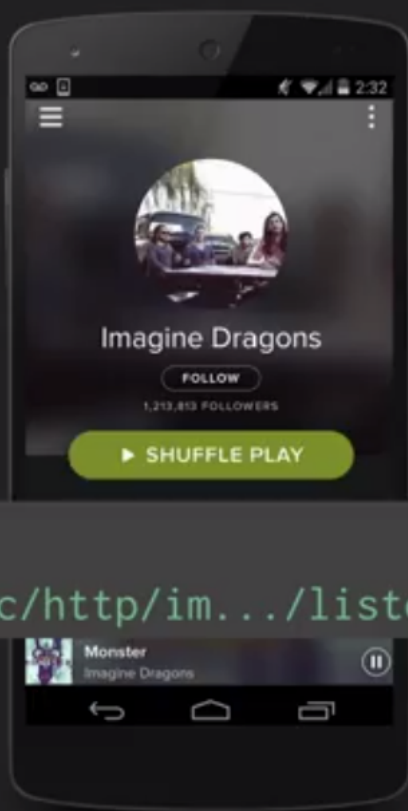
Unique single string address

```
<link rel="alternate" href="android-app://com.example/http/example.com/gizmos" />
```



http://spotify.com/...

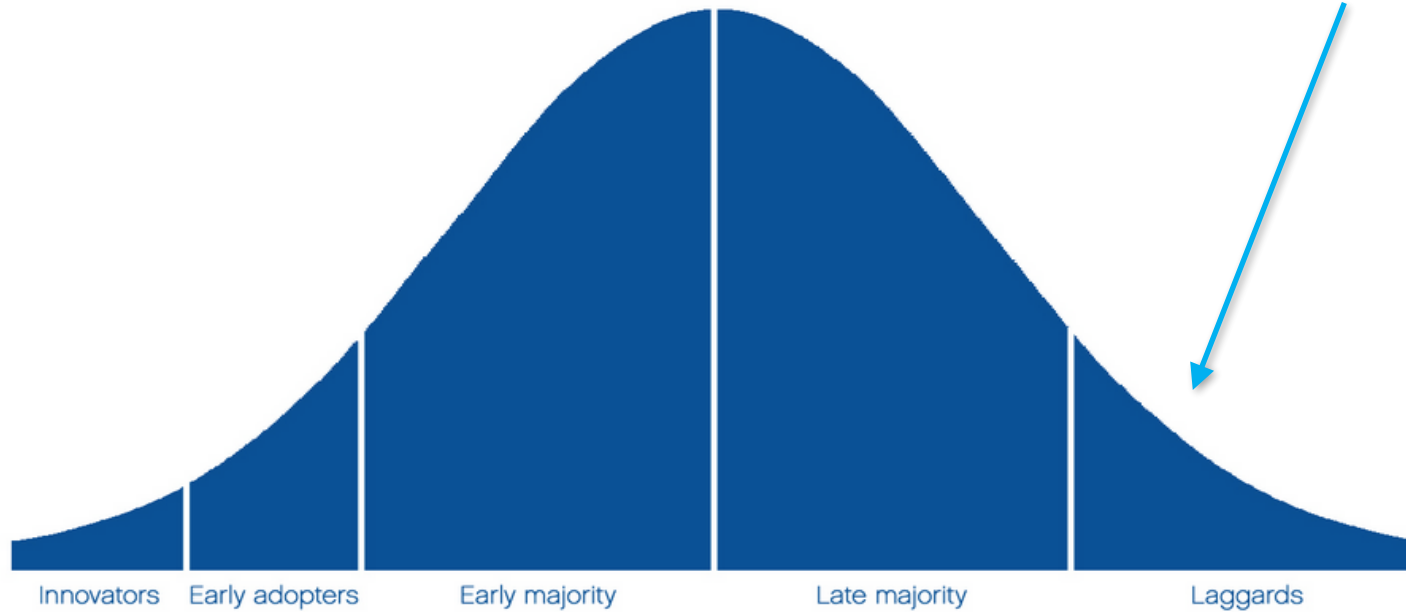
```
<script type="application/ld+json">
{
  "@context": "http://schema.org",
  "@type": "MusicGroup",
  "name": "Imagine Dragons",
  "potentialAction": {
    "@type": "ListenAction",
    "target": "android-app://com.spotify.music/http/im.../listen"
  }
}
</script>
```



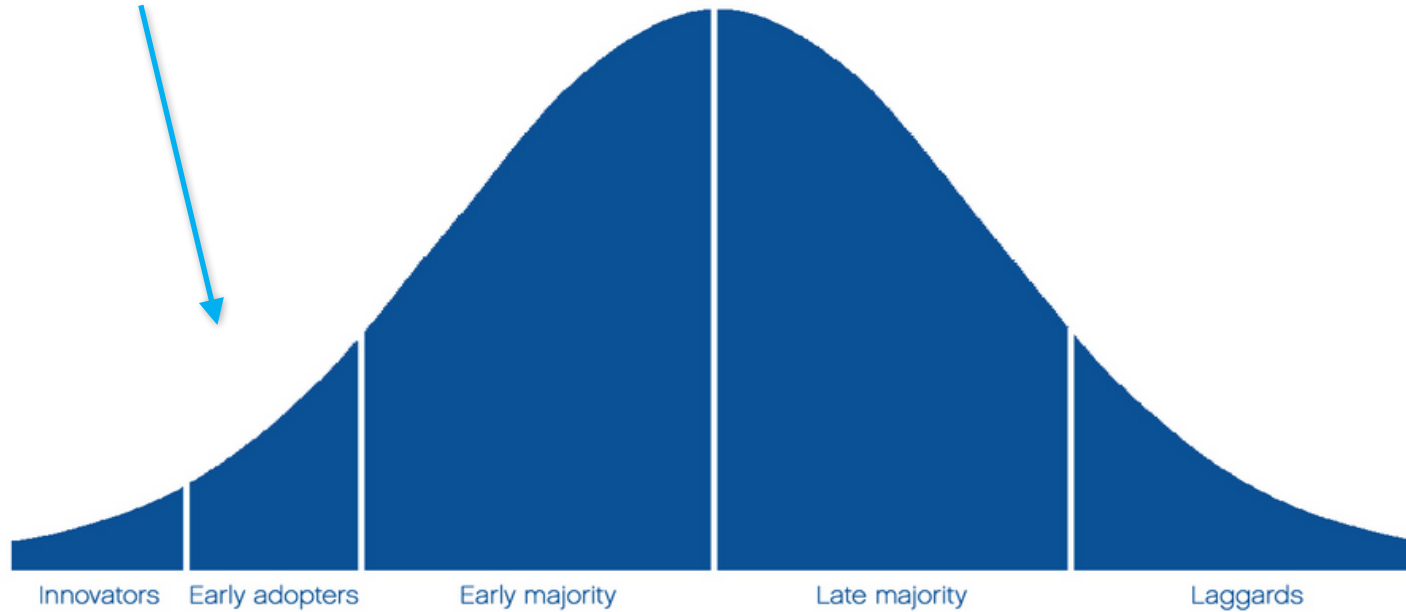


Exciting time for SEO

Feels like we're over here



We're actually over here



Getting to AI faster



MOZCON

2014

THANK YOU!

SESSION Q&A



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