

# DOCUMENT SNIPPET GENERATION: CLUSTERING & LABELING

TROYA ÇAĞIL KÖYLÜ

21002018

# INTRODUCTION

Presenting search results in clustered form enables:

- Better topic understanding
- Ease of access

## Clustered Results

Top 200 results of at least 20,373,974 retrieved for the query **jaguar** (Details)

▶ **jaguar** (209)

⊕ ▶ **Cars** (74)

⊕ ▶ **Club** (24)

⊕ ▶ **Cat** (23)

⊕ ▶ **Animal** (13)

⊕ ▶ **Restoration** (10)

⊕ ▶ **Mac OS X** (8)

⊕ ▶ **Jaguar Model** (8)

⊕ ▶ **Request** (6)

⊕ ▶ **Mark Webber** (6)

▶ **Mays** (5)

▼ **More**

Find in clusters:

Enter Keywords


1. **Jag-lovers - THE source for all Jaguar information** (new window) (home) (cache) (preview) (cluster)

... Internet! Serving Enthusiasts since 1993 The Jag-lovers Web Currently with 40881 members The Premier **Jaguar** Cars web resource for all enthusiasts Lists and Forums Jag-lovers originally evolved around its ...

www.jag-lovers.org - Open Directory 2, Wiscut 8, Ask Jeeves 9, MSN 9, Looksmart 12, MSN Search 19

2. **Jaguar Cars** (new window) (home) (cache) (preview) (cluster)

[...] redirected to **www.jaguar.com**

www.jaguarcars.com - Looksmart 1, MSN 2, Lycos 3, Wiscut 6, MSN Search 9, MSN 20

3. **http://www.jaguar.com/** (new window) (home) (preview) (cluster)

www.jaguar.com - MSN 1, Ask Jeeves 1, MSN Search 3, Lycos 9

4. **Apple - Mac OS X** (new window) (home) (preview) (cluster)

Learn about the new OS X Server, designed for the Internet, digital media and workgroup management. Download a technical factsheet.

www.apple.com/macosx - Wiscut 1, MSN 3, Looksmart 26

Jaguar Burusan Otomotivde - jaguar-turkiye.com  
www.jaguar-turkiye.com/ \*  
Görülmemiş asalet Burusan Otomotiv Satış Noktaları'nda!

Jaguar: Luxury Cars & Sports Cars | Jaguar USA  
www.jaguarusa.com/ \* Jaguar Cars -  
The official home of Jaguar USA. Our luxury cars feature innovative  
designs along with legendary performance to deliver one of the top sports  
cars in the ...  
Models - F-Type - XE - F-PACE

In the news



2016 Jaguar XF to hit 60 mph in 5 seconds,  
lead with cutting-edge infotainment  
Autoblog - 2 hours ago  
Jaguar has trimmed up to 265 lbs of fat, slashed the  
sprint to 60 and is promising an ...

Jaguar F-Pace SUV debuting at Frankfurt show  
AutoExpress - 2 hours ago

Christina Hendricks unveils new Jaguar  
USA Today - 4 hours ago

More news for jaguar

Jaguar  
www.jaguar.com/ \* Jaguar Cars -  
Official worldwide web site of Jaguar Cars. Directs users to pages tailored  
to country-specific markets and model-specific websites.

Jaguar UK | Luxury Sports & Executive Saloon Cars  
www.jaguar.co.uk/ \* Jaguar Cars -  
Jaguar has always believed that a car is the closest thing you can create  
to something that is alive. Explore our range of luxury models, XF, XJ, XK  
and the new ...

Jaguar Cars - Wikipedia, the free encyclopedia  
en.wikipedia.org/wiki/Jaguar\_Cars \* Wikipedia -  
Jaguar Cars is a brand of Jaguar Land Rover, a British multinational car  
manufacturer headquartered in Whitley, Coventry, England, owned by the  
Indian ...

Jaguar | Facebook  
https://www.facebook.com/Jaguar \*  
"When I look at anything, I see the spaces as much as the objects and  
when you're designing a car you do the same." — Ian Callum, Jaguar  
Director of Design.

Images for jaguar

Report images



## Jaguar Cars

Car manufacturer



Jaguar Cars is a brand of Jaguar Land  
Rover, a British multinational car  
manufacturer headquartered in Whitley,  
Coventry, England, owned by the Indian  
company Tata Motors since 2008.  
Wikipedia

Founded: September 4, 1922, Blackpool, United Kingdom

CEO: Ralf Speth

Founders: William Walmsley, William Lyons

Profiles



Facebook



Twitter



YouTube



Instagram



LinkedIn

Recent posts on Google+



Jaguar

683,467 followers • Shared publicly



"When I look at anything, I see the spaces  
as much as the objects and when you're  
designing a car you do the same." — Ian  
Callum, Jaguar Director of Design.  
30 Mar 2015

Latest models

View 4+ more



2015  
Jaguar XF



2015  
Jaguar XJ



2015  
Jaguar  
F-TYPE



2015  
Jaguar  
XK



2008  
Jaguar  
X-TYPE

People also search for

View 15+ more



Aston  
Martin



Maserati



Audi



Porsche



BMW

Feedback

See results about

Jaguar (Animal)  
Scientific name: Panthera onca  
Lifespan: 12 – 15 y (In Wild)



# METHODOLOGY

- Preprocessing
- Clustering
- Labeling
- Performance Measures

# PREPROCESSING

- Constructing term list
- Phrase extraction
- Term weighting

# CLUSTERING

- Cover coefficient-based clustering
- Modified k-means algorithm

# LABELING

- Using term weighting



# PERFORMANCE MEASURES

- Clustering evaluation
- Labeling evaluation

# EXPECTED RESULTS

- Meaningful clusters & labels
- “Significant difference from Monte Carlo method”

# CONCLUSION

- Future work