

# Automated Tagging

## *Status of technology*



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**WORLD'S OLDEST PHOTO ARCHIVE  
ESTABLISHED IN FIRENZE, ITALY IN 1852  
OVER 5.5M IMAGES PRIVATELY OWNED  
PLUS 45M FROM THIRD PARTY PARTNER AGENCIES**

**[WWW.ALINARI.COM](http://WWW.ALINARI.COM)**























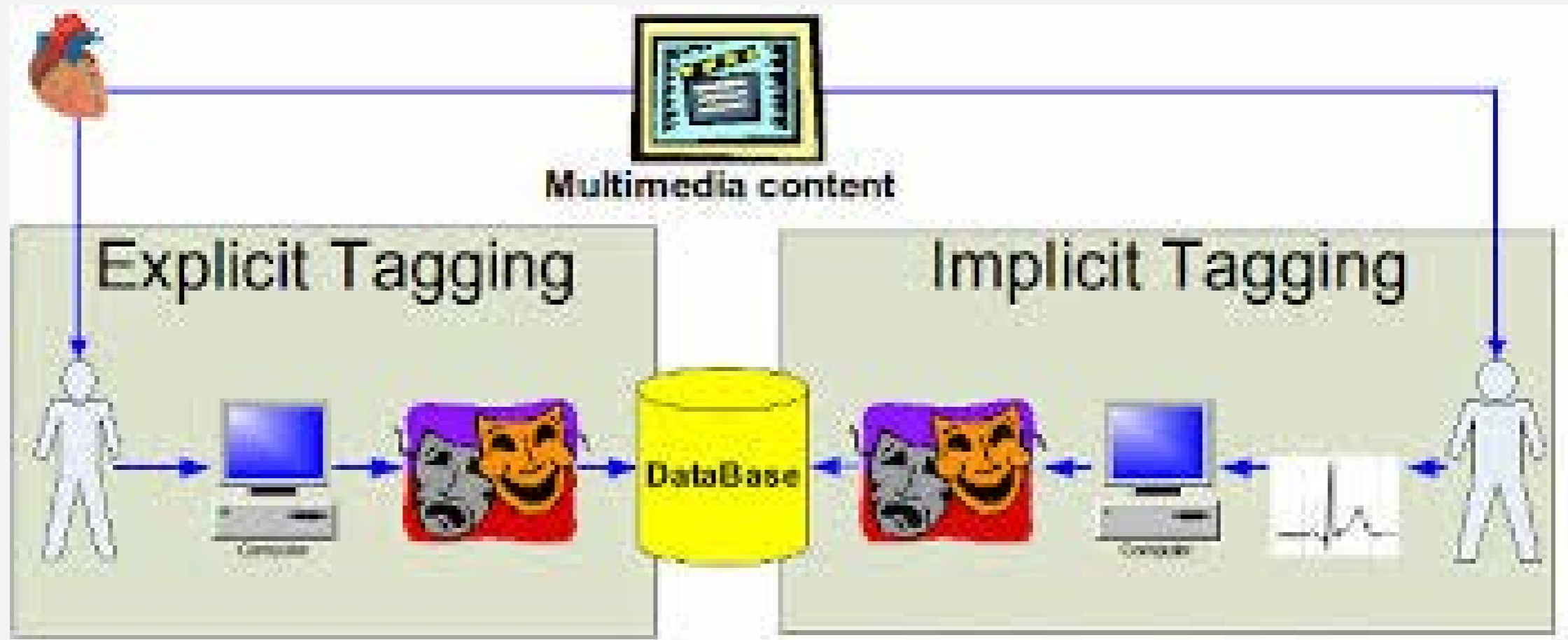




# content selection







The principle of implicit tagging is to replace the user input by automatically finding descriptive tags for multimedia content, derived from an observer's natural response.





Tagging should identify, possibly automatically and (hopefully) precisely, the most relevant icons/objects/gesture in a frame and assign the most relevant keywords

# The benefits of auto-tagging

Autotagging it reduce the human intervation during the cataloguing process by identify, in a quick and effcient way, relevant keywords. This is important also to cut-off labour costs for indexing that affect so much large content providers, libraries, etc.

As a general approach, for example for libraries and content providers, today's tendency is to provide initial set of auto-tagged keywords and than the indexing person refine and improve them manually.



# Google, Facebook, Flickr, Instagram ....., all are putting more and more effort (and commercial opportunities) for auto-tagging.....

### Tag Review

Turn on Tag Review to review tags friends add to your content before they appear on Facebook. When someone who you're not friends with adds a tag to one of your posts you'll always be asked to review it.

Remember: when you approve a tag, the person tagged and their friends may be able to post.

Disabled ▼  
 Enabled  
 Disabled

flickr

Signed in as Stephanie Booth (58 new) Help Sign Out

Home You Organize Contacts Groups Explore

Search everyone's photos Search

### Doc Docks

Uploaded on June 20, 2007 by psd

psd's photostream 6,414 photos

Tags

- Supernova
- supernova2007
- Union Square
- San Francisco
- California
- USA
- USA

docsear[s] **ADD**

Choose from your tags

Separate each tag with a space. For a camera phone urban meeting. Or to join 2 words together in one tag, use double quotes: "daily commute".

*easy!* *click!*

Example, Inc Admin Help

Overview

Example, Inc

### Containers

This is the list of containers in this Google Tag Manager account. A container holds all the tags for a specific website.

Name	# of Tags	# of Users	Permissions
example.com	0	1	View, Edit, Delete, and Publish

© 2013 Google | Send Feedback

2014

Tag People

#mycrib #camera360 #ilovegold

q w e r t y u i o p

a s d f g h j k l

wikiHow

# Flickr recent issue on auto-tagging



Tags **BETA** ?

- Dachau
- architecture
- building structure
- building
- tangle
- trellis
- jungle gym
- truss
- sport
- pylon

The famous train tracks leading into Auschwitz, which were labelled “sport” by Flickr’s algorithm.  
Photograph: Christopher Furlong/Getty Images




# Imagga and 6 alternative image recognition services

In a recent post on the newly introduced component of Wolfram's language for image identification ImageIdentify [Jordan Novet of Venture Beat](#) conducted a quick test of ImageIdentify against 5 deep learning platforms for image recognition

[http://](#) **1. Upload your photo** [atives/](#)

You can upload your photo or paste any URL to an image



**Generated tags**

Concepts

cup	100.00%
mug	78.94%
coffee mug	75.97%
drinking vessel	45.59%
beverage	37.80%
punch	37.34%
container	33.62%
coffee	31.18%
drink	29.80%
vessel	29.65%

[↪ show me more tags](#)

Colors

light brown	32.19%
black	17.89%

Image URL

**Imagga: cup, mug, coffee mug, drinking vessel, beverage, punch, container, coffee, drink, vessel**

# Current (and latest) solutions for auto-tagging:

[Imagga](#)

[Wolfram ImageIdentify](#)

[CamFind](#)

[Clarifai](#)

[MetaMind](#)

[Orbeus](#)

[AlchemyAPI](#)











# imagga

<http://imagga.com>

**Image Tagging API**  
for building **scalable** solutions  
that **understand images**

[api@imagga.com](mailto:api@imagga.com)

[twitter.com/imagga](https://twitter.com/imagga)

[facebook.com/imagga](https://facebook.com/imagga)





3Y



150Y

---

2B+ NEW PHOTOS SHARED  
EVERY DAY



# The Status quo



**Huge amount**  
of user-generated  
content



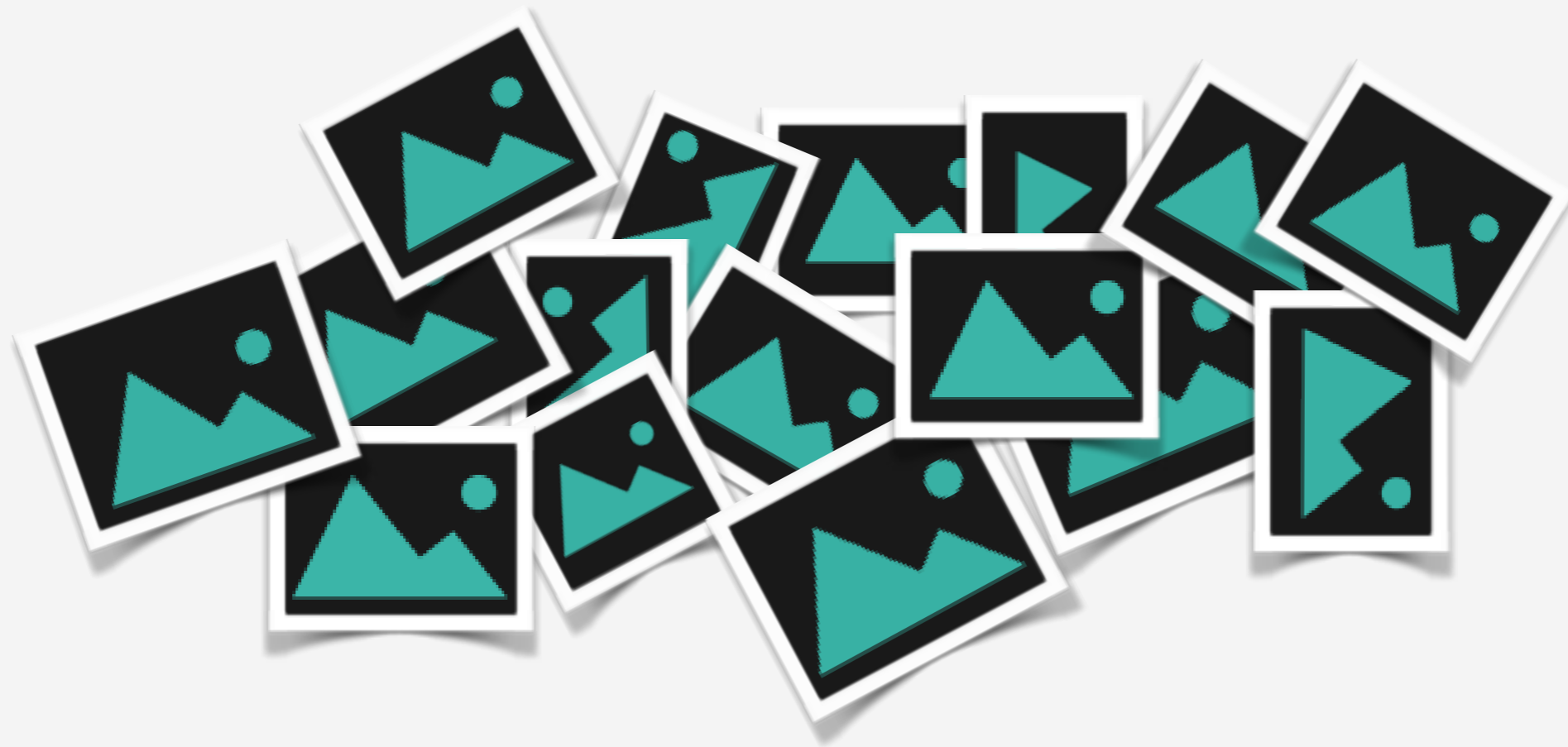
**NOT**  
searchable



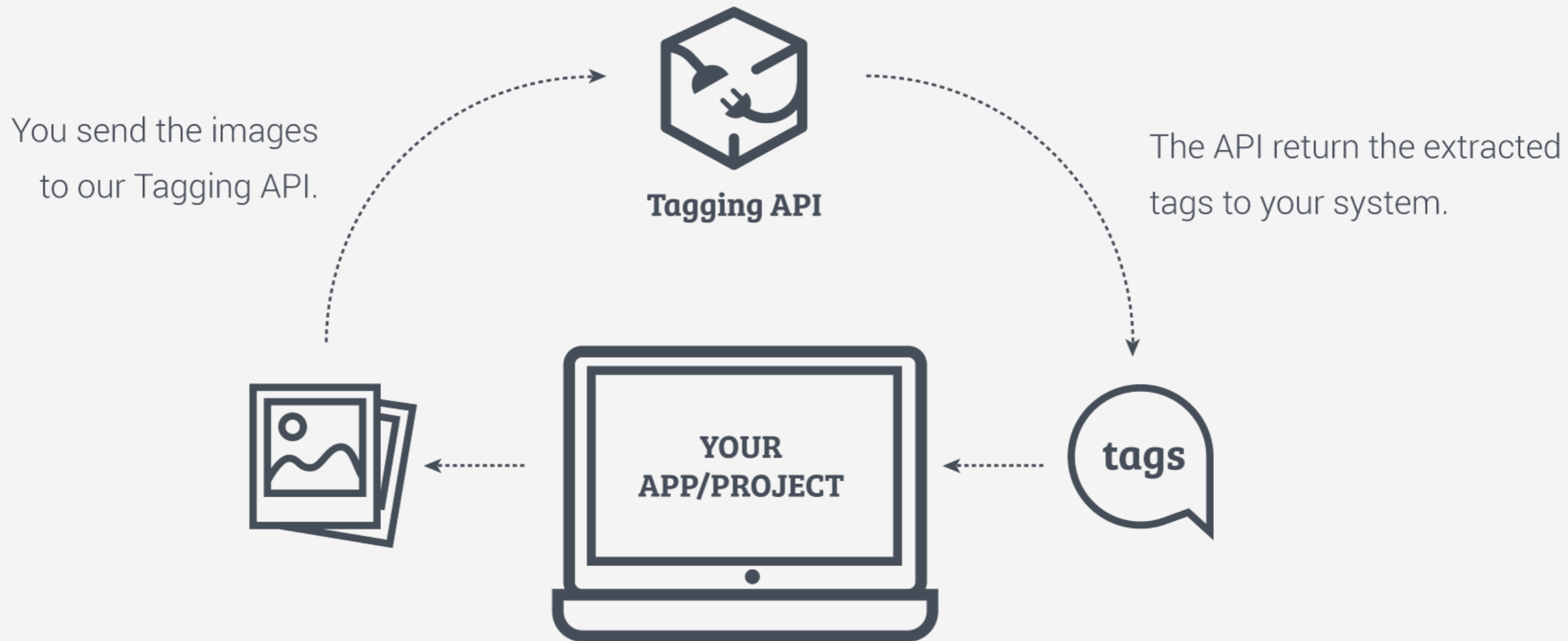
**NOT**  
monetizable



How to **understand** and  
**organize** all these photos?



# Imagga's Auto-Tagging API





# KEYWORD TAGGING



## OBJECTS & CONCEPTS

strawberry

closeup

berry

organic

fruit

nutrition

healthy

healthy

fresh

juicy

food

dessert



## COLORS

red

olive  
green

light  
grey

grey

beige



# CATEGORY TAGGING



Beaches & Seaside

Nature & Landscape

Sunrises & Sunsets

Events & Parties

# Value proposition



**Automated  
solution**



Makes images  
**searchable**



Replaces  
**manual effort**



# Keyword tagging demos:

## On Imagga's Website

<http://imagga.com/auto-tagging-demo>

## As an Adobe Lightroom Plug-in

<http://wordroom.org/>

## iPhone Demo App Screencast

<https://www.youtube.com/watch?v=J6a4uwsIHrk>



# How it works:

**2700+ object classes** recognition

deep-learning based

**conceptual** conclusions

e.g. 'computer' + 'desk' => 'office', 'work', 'business'

**semantic** expansion

e.g. 'car' => 'vehicle', 'mean of transportation'



# Upcoming features:

## **improved object recognition**

refining the deep learning model and classes

## **facial recognition**

based on per-user learning set of images

## **feedback-loop**

immediate improvement of results via user feedback (add/remove keywords)

## **landmark recognition**

recognizing popular landmarks in major cities around the world





# Applicable for **Personal Photo Services**

- **Apps** for mobile photo organization
- **Cloud services** for consumers
- **Telecom** and **home media** solutions
- **OEM** with mobile device manufacturers
- **Profiling** users based on content



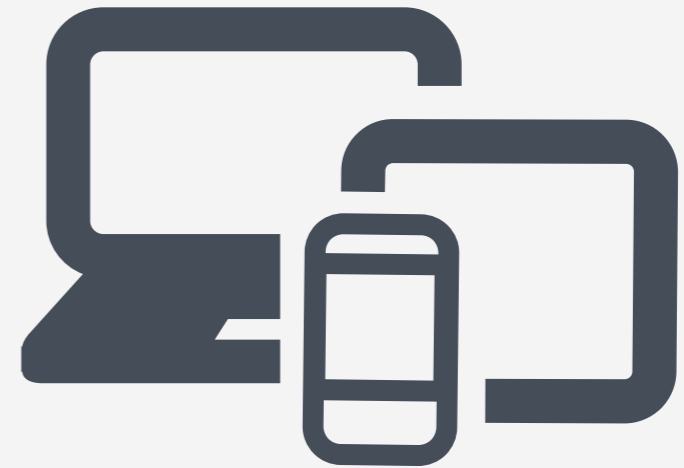
# Integration and business model



## Cloud

monthly prepaid volume  
or  
per-server fee

or



## On-premise

volume based license  
+  
per machine setup &  
maintenance fee

# How to get started:



## Sign Up

for API access (<https://imagga.com/pricing>)



## Get an API key

and start making calls immediately



## Get creative

and take advantage of the returned tags



# Thank you!



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