

# Some Further Considerations

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# Search Engine Monetisation

How do search engine applications earn money?

## ■ Example: Google AdWords

- Additional "paid" advertising links are displayed in accordance with the user's search query.

pancakes recipe

All Videos Images Shopping News More Tools

About 315,000,000 results (0.49 seconds)

**Ad · https://www.rspcaassured.org.uk/recipes/pancakes**

**Easy Pancake Recipe - How to Make Pancake Batter**

Pancakes Are Simple to Make, Delicious to Eat and a Little Different All Over the World. Simple Recipes for British Pancakes, American Pancakes and Japanese...

Support Us · Farm Investigations · Farm Animal Welfare · Welfare Standards · Annual Review...

<https://www.bbcgoodfood.com> › Recipes

**Easy pancakes recipe | BBC Good Food**

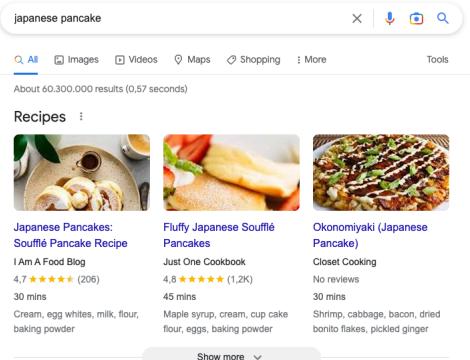
Put 100g plain flour, 2 large eggs, 300ml milk, 1 tbsp sunflower or vegetable oil and a pinch of salt into a bowl or large jug, then whisk to a smooth batter.

★★★★★ Rating: 4 · 547 reviews · 30 mins

How to make pancakes · Banana oat pancakes · Whisk · Lemon

# Quality of Results

- What is the problem with PageRank?
  - When displaying search results, documents with high PageRank appear before documents with low PageRank
- But what about Synonyms and homonyms (e.g. "pancake"...)



japanese pancake

About 60.300.000 results (0,57 seconds)

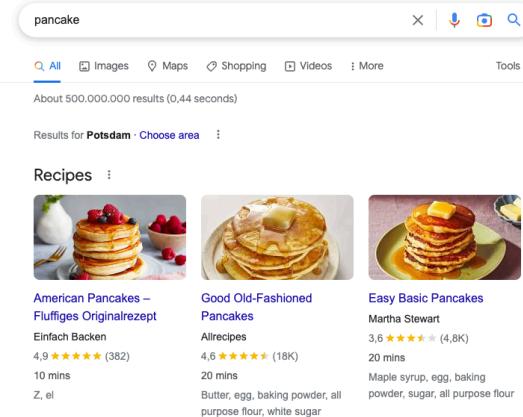
Recipes :

- Japanese Pancakes: Soufflé Pancake Recipe
- Fluffy Japanese Soufflé Pancakes
- Okonomiyaki (Japanese Pancake)

IAm A Food Blog  
4.7 ★★★★★ (206)  
30 mins  
Cream, egg whites, milk, flour, baking powder

Just One Cookbook  
4.8 ★★★★★ (1,2K)  
45 mins  
Maple syrup, cream, cup cake flour, eggs, baking powder

Closest Cooking  
No reviews  
30 mins  
Shrimp, cabbage, bacon, dried bonito flakes, pickled ginger



pancake

About 500.000.000 results (0,44 seconds)

Results for Potsdam - Choose area

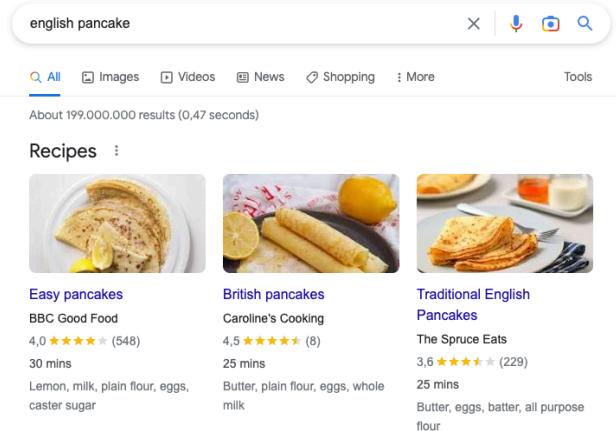
Recipes :

- American Pancakes – Fluffiges Originalrezept
- Good Old-Fashioned Pancakes
- Easy Basic Pancakes

Einfach Backen  
4,9 ★★★★★ (382)  
10 mins  
Z, el

Allrecipes  
4,6 ★★★★★ (18K)  
20 mins  
Butter, egg, baking powder, all purpose flour, white sugar

Martha Stewart  
3,6 ★★★★★ (4,8K)  
20 mins  
Maple syrup, egg, baking powder, sugar, all purpose flour



english pancake

About 199.000.000 results (0,47 seconds)

Recipes :

- Easy pancakes
- British pancakes
- Traditional English Pancakes

BBC Good Food  
4,0 ★★★★★ (548)  
30 mins  
Lemon, milk, plain flour, eggs, caster sugar

Caroline's Cooking  
4,5 ★★★★★ (8)  
25 mins  
Butter, plain flour, eggs, whole milk

The Spruce Eats  
3,6 ★★★★★ (229)  
25 mins  
Butter, eggs, batter, all purpose flour

- text in graphics, non-text multimedia documents,...
- Danger of PageRank manipulation

# Query Specification

- Quality of search results also depends on the specification of the search query
- Refinement of the search query by specifying several matching keywords
- Combination of keywords via logical operators

A screenshot of a search results page for "japanese pancake". The search bar at the top contains the query. Below it, there are filters for All, Images, Videos, Maps, Shopping, and More. The results section shows three recipe cards:

- Japanese Pancakes: Soufflé Pancake Recipe** from **I Am A Food Blog**. It has 4.7 stars and 206 reviews. Preparation time is 30 mins. Ingredients include cream, egg whites, milk, flour, baking powder.
- Fluffy Japanese Soufflé Pancakes** from **Just One Cookbook**. It has 4.8 stars and 1.2K reviews. Preparation time is 45 mins. Ingredients include maple syrup, cream, cup cake flour, eggs, baking powder.
- Okonomiyaki (Japanese Pancake)** from **Closet Cooking**. It has no reviews. Preparation time is 30 mins. Ingredients include shrimp, cabbage, bacon, dried bonito flakes, pickled ginger.

At the bottom, there is a "Show more" button.

A screenshot of a search results page for "pancake". The search bar at the top contains the query. Below it, there are filters for All, Images, Videos, Maps, Shopping, and More. The results section shows three recipe cards:

- American Pancakes – Fluffiges Originalrezept** from **Einfach Backen**. It has 4.9 stars and 382 reviews. Preparation time is 10 mins. Ingredients include flour, eggs, baking powder.
- Good Old-Fashioned Pancakes** from **Allrecipes**. It has 4.6 stars and 18K reviews. Preparation time is 20 mins. Ingredients include butter, egg, baking powder, all purpose flour, white sugar.
- Easy Basic Pancakes** from **Martha Stewart**. It has 3.6 stars and 4.8K reviews. Preparation time is 20 mins. Ingredients include maple syrup, egg, baking powder, sugar, all purpose flour.

A screenshot of a search results page for "english pancake". The search bar at the top contains the query. Below it, there are filters for All, Images, Videos, News, Shopping, and More. The results section shows three recipe cards:

- Easy pancakes** from **BBC Good Food**. It has 4.0 stars and 548 reviews. Preparation time is 30 mins. Ingredients include lemon, milk, plain flour, eggs, whole caster sugar.
- British pancakes** from **Caroline's Cooking**. It has 4.5 stars and 8 reviews. Preparation time is 25 mins. Ingredients include butter, plain flour, eggs, whole milk.
- Traditional English Pancakes** from **The Spruce Eats**. It has 3.6 stars and 229 reviews. Preparation time is 25 mins. Ingredients include butter, eggs, batter, all purpose flour.

# Combining Keywords

- Combination of keywords via logical operators
- Example: "American" AND (+) "Pancake"

american + pancake

All Images Shopping Videos News More Tools

About 67.700.000 results (0,45 seconds)

<https://www.einfachbacken.de> › amer... · Translate this page ·

**American Pancakes – Fluffiges Originalrezept**

Wir zeigen dir, wie du ganz einfach super fluffige American Pancakes zaubern kannst. Das simple Grundrezept kommt mit nur wenig Zutaten aus und ist so ...

★★★★★ Rating: 4,9 · 382 votes · 10 mins

Mini-Pancake-Spieße · Vegane Bananen-Pancakes · Vegane Pancakes

Recipes



American Pancakes – Fluffiges Originalrezept	Fluffy American pancakes	American Pancakes
Einfach Backen	BBC	Chefkoch
4,9 ★★★★★ (382)	4,4 ★★★★★ (1,2K)	4,6 ★★★★★ (137)
10 mins	40 mins	25 mins
Z, el	Maple syrup, butter, olive oil, plain flour, egg	Ei

VS.

pancake

All Images Maps Shopping Videos More Tools

About 500.000.000 results (0,44 seconds)

Results for Potsdam · Choose area

Recipes



American Pancakes – Fluffiges Originalrezept	Good Old-Fashioned Pancakes	Easy Basic Pancakes
Einfach Backen	Allrecipes	Martha Stewart
4,9 ★★★★★ (382)	4,6 ★★★★★ (18K)	3,6 ★★★★★ (4,8K)
10 mins	20 mins	20 mins
Z, el	Butter, egg, baking powder, all purpose flour, white sugar	Maple syrup, egg, baking powder, sugar, all purpose flour

# Further Filter Operations

- Language filter
- Domain / IP filter
- Document type
- Creation/modification date
- Document size
- etc...

crepes recette

All Images Videos News Shopping More Tools

classique doux Marmiton Nutella

Ingrédients

- 150 g (1 tasse) de farine tout usage non blanchie.
- 30 ml (2 c. à soupe) de sucre.
- 1 pincée de sel.
- 2 œufs.
- 375 ml (1 ½ tasse) de lait.
- 2,5 ml (1/2 c. à thé) d'extrait de vanille.
- 15 ml (1 c. à soupe) de beurre non salé, fondu.
- Beurre ramolli, pour la cuisson.

<https://www.ricardocuisine.com/recettes/5864-crepes-fines-a-dejeuner> - Ricardo Cuisine

pfannkuchen

All Images Videos News Shopping More Tools

About 12.100.000 results (0,45 seconds)

[Pfannkuchen - Das schnelle Grundrezept - Einfach Backen](https://www.einfachbacken.de/pfannkuchen)  
Ob als Pfannkuchen, Eierkuchen oder Palatschinken - wir lieben sie einfach. Sie sind so einfach und schnell zubereitet und schmecken mit jeder Füllung ...  
★★★★★ Rating: 4,8 · 302 votes · 15 mins  
Vegane Pfannkuchen - Heidelbeer-Pfannkuchen - Pfannkuchen ohne Mehl

Recipes

Image	Name	Description	Rating	Time
	Pfannkuchen - Das schnelle Grundrezept	Einfach Backen	4,8 ★★★★★ (302)	15 mins
	Der perfekte Pfannkuchen - gelingt einfach immer	Chefkoch	4,8 ★★★★★ (2,4K)	15 mins
	Pfannkuchen	Backen macht glücklich	4,8 ★★★★★ (192)	15 mins

american + pancake

All Images Shopping Videos News More Tools

About 67.700.000 results (0,45 seconds)

[American Pancakes – Fluffiges Originalrezept](https://www.einfachbacken.de/american-pancake)  
Wir zeigen dir, wie du ganz einfach super fluffige American Pancakes zaubern kannst. Das simple Grundrezept kommt mit nur wenig Zutaten aus und ist so ...  
★★★★★ Rating: 4,9 · 382 votes · 10 mins  
Mini-Pancake-Spieße - Vegane Bananen-Pancakes - Vegane Pancakes

Recipes

Image	Name	Description	Rating	Time
	American Pancakes – Fluffiges Originalrezept	Einfach Backen	4,4 ★★★★★ (382)	40 mins
	Fluffy American pancakes	BBC	4,6 ★★★★★ (1,2K)	Maple syrup, butter, olive oil, plain flour, egg
	American Pancakes	Chefkoch	4,6 ★★★★★ (137)	Ei

# Specialised Search Services

... for example, on Google:

Google Books

 Google Maps

 Google Shopping

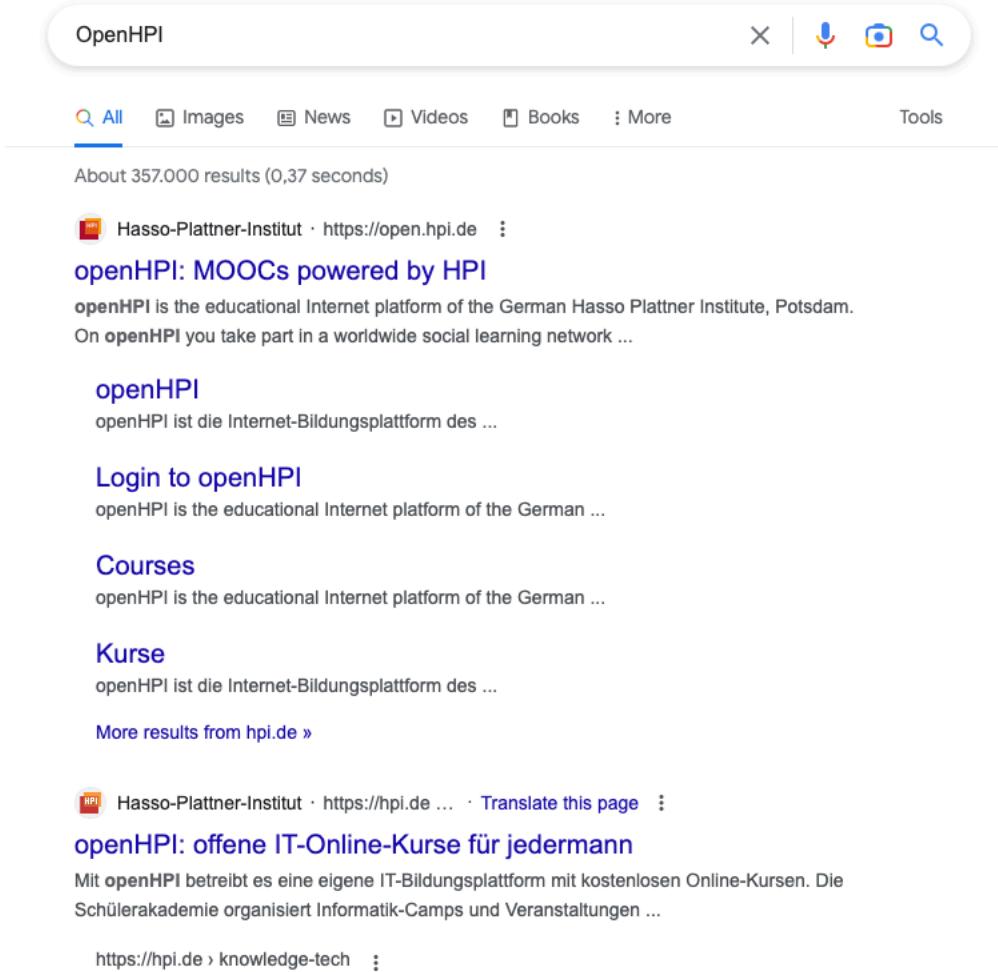
Google  
Video

Google Flights

Google  
Finance 

# Organising Search Results

- Search results are usually displayed as a sorted list



The screenshot shows a search results page from a search engine. The search query "OpenHPI" is entered in the search bar. Below the search bar, there are navigation links for "All", "Images", "News", "Videos", "Books", and "More". A "Tools" link is also present. The search results section displays several entries:

- Hasso-Plattner-Institut · https://open.hpi.de**  
**openHPI: MOOCs powered by HPI**  
openHPI is the educational Internet platform of the German Hasso Plattner Institute, Potsdam.  
On openHPI you take part in a worldwide social learning network ...  
  
**openHPI**  
openHPI ist die Internet-Bildungsplattform des ...
- Login to openHPI**  
openHPI is the educational Internet platform of the German ...
- Courses**  
openHPI is the educational Internet platform of the German ...
- Kurse**  
openHPI ist die Internet-Bildungsplattform des ...

[More results from hpi.de »](#)

**Hasso-Plattner-Institut · https://hpi.de ... · Translate this page**  
**openHPI: offene IT-Online-Kurse für jedermann**  
Mit openHPI betreibt es eine eigene IT-Bildungsplattform mit kostenlosen Online-Kursen. Die Schülerakademie organisiert Informatik-Camps und Veranstaltungen ...  
  
<https://hpi.de> › knowledge-tech

# Image Search

Google

The screenshot shows a Google search interface with the query "How to make pancakes". The results include a search bar at the top with a "Find image source" button. Below the search bar, there are filters for All, Videos, Images, Shopping, News, and Tools. The search results page displays approximately 430,000,000 results in 0.54 seconds. The first result is an ad for "How to Make Pancake Batter - Easy Pancake Recipe" from spcaassured.org.uk. The second result is a link to "Easy pancakes recipe | BBC Good Food" with a preview image of a stack of pancakes. Other results include links to BBC Good Food's pancake recipe, a BBC Good Food article on how to flip a pancake, and a BBC Good Food article on how to make pancakes. At the bottom of the search results, there are buttons for "Search", "Text", and "Translate".

## Visual matches

The screenshot shows a visual search interface with a grid of search results. Each result includes a thumbnail image, a website URL, and a brief description. The results are categorized under "Visual matches". The websites listed include victoriusseo.com, mylittlebigweb.c..., SEO: Optimize Your Images And Improv..., techlicious.com, saucemagazine...., 12 Google Search Tips Everyone Should..., instapage.com, pagely.com, Recipe Card: A Free WordPress Plugin fo..., and wpulike.com. The interface also includes a "Upload" button and a "Sign In" button.

Did you find these results useful?

Yes No

# Search Engines – Other Uses



## ■ Examples:

- People Search
- Blog Intelligence
- Semantic Multi-media machines
- ...



Welcome to your professional community

Email

Password (8+ characters)

By clicking Agree & Join, you agree to the LinkedIn [User Agreement](#), [Privacy Policy](#), and [Cookie Policy](#).

**Agree & Join**

chrome web store

Home > Extensions > Voice Search

Voice Search

[Add to Chrome](#)

www.lspeech.org Featured

★★★★★ 2,446 | [Search Tools](#) | 80,000+ users

[Overview](#) Privacy practices Reviews Related

ResearchGate

**Discover scientific knowledge and stay connected to the world of science**

**Join for free**

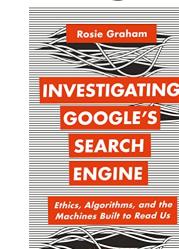
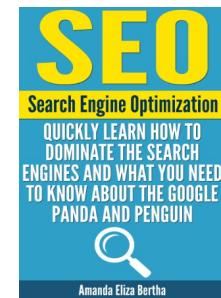
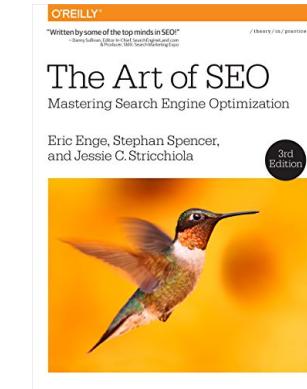
# Summary

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- Requirements and search engine types
- Web catalogs
- Index based search engines
- Structure of the WWW (graph with nodes and edges)
- Operation of a search engine
- Data acquisition (e.g. webcrawler)
- Data preparation and analysis
- Document discovery and clustering
- Search result rankings
  - Google PageRank – an example
- Quality of search results
- Presentation of search results

# References and Sources

- Images ([www.pixaby.com](http://www.pixaby.com))
- Google Search Central  
(<https://developers.google.com/search/docs/crawling-indexing/robots/create-robots-txt>)
- D. Hawking, "Web search engines. Part 1," in *Computer*, vol. 39, no. 6, pp. 86-88, June 2006, doi: 10.1109/MC.2006.213
- *2018. Web Search. Text Data Management and Analysis: A Practical Introduction to Information Retrieval and Text Mining.* Association for Computing Machinery and Morgan & Claypool.  
<https://doi.org/10.1145/2915031.2915042>
- Search Engine Optimisation  
(<https://developers.google.com/search/docs/fundamentals/seo-starter-guide>)





# ChatGPT, YouChat, & The Future of Web Search

**Dr. Anne Kayem**

Hasso-Plattner-Institute  
University of Potsdam

# Privacy and Web Search

Important to recognise that Google is a private company and can manipulate search results to match its specific goals

The image consists of two side-by-side screenshots. The left screenshot shows a Google search results page for the query "How to make pancakes". At the top, there is a sponsored result for "Easy pancakes recipe | BBC Good Food". Below it, the organic search results begin with a link to "How to Make Pancake Batter - Easy Pancake Recipe" from "BBC Good Food". The right screenshot shows a "Visual matches" search interface from the Internet Research Agency. It displays a grid of search results for the same query, with many results from websites like brandience.com and victoriousseo.com.

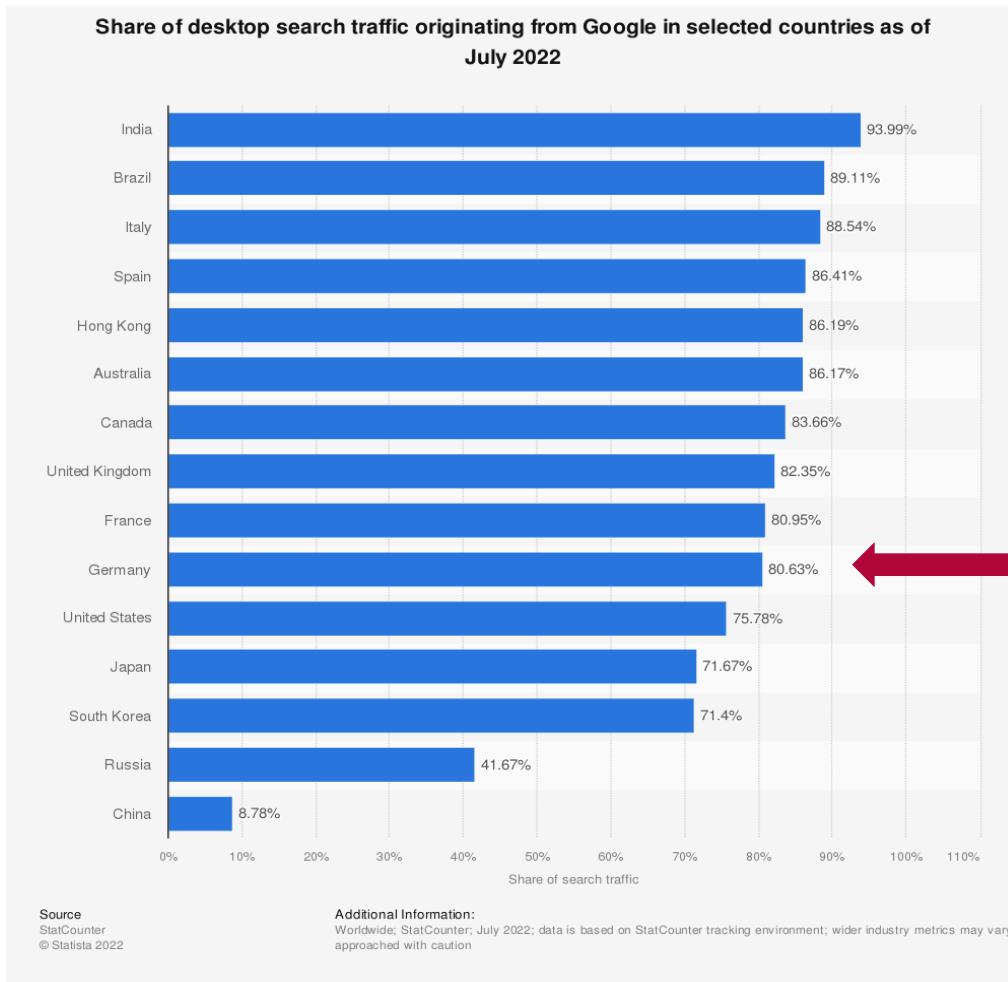
## How Russian Facebook Ads Divided and Targeted US Voters Before the 2016 Election

New research shows just how prevalent political advertising was from suspicious groups in 2016—including Russian trolls.

Internet Research Agency

# Open Web Index

- Google and similar search engines rely on personal information to support personalised search



Each search query helps Google get better at "correctly" responding to queries



Share of search engine traffic 80,63%

# Open Web Index



- Breaking the monopoly of Google
  - EU-Funded Development of an Open Web Index

The screenshot shows the homepage of the Search Studies HAW Hamburg website. At the top, there are logos for 'SEARCH STUDIES' and 'HAW HAMBURG'. A blue button labeled 'Contact Us' is visible. Below the header, there is a navigation bar with links for Home, Research projects, Our Team, Publications, Events, Blog, and language options (USA and Germany). A large banner features a dark background with hexagonal patterns and a central blue button labeled 'OPEN WEB INDEX'. At the bottom of the page, a breadcrumb navigation shows 'Home / Research projects / Open Web Index'.

## Open Web Index (OWI)

The main idea of Open Web Index is to set up a publicly funded, global, searchable index of the Web that is open to competing companies, institutions and civil society actors. The Open Web Index is a European-based approach for a competitive and data-protecting digital infrastructure. It aims to build a basis for genuine competition in the digital platform business.

# Chat-GPT

- Taking search a step further to enable conversational dialogue
- Instead of searching for “how to make pancakes”, nice to have more interaction

The screenshot shows three search results pages from a search engine:

- japanese pancake**: About 60,300,000 results. Results include "Japanese Pancakes: Soufflé Pancake Recipe" (4.7 stars, 206 reviews), "Fluffy Japanese Soufflé Pancakes" (4.8 stars, 1.2K reviews), and "Okonomiyaki (Japanese Pancake)" (No reviews).
- english pancake**: About 199,000,000 results. Results include "Easy pancakes" (BBC Good Food, 4.0 stars, 548 reviews), "British pancakes" (Caroline's Cooking, 4.5 stars, 8 reviews), and "Traditional English Pancakes" (The Spruce Eats, 3.6 stars, 229 reviews).
- pancake**: About 500,000,000 results. Results include "American Pancakes – Fluffiges Originalrezept" (Einfach Backen, 4.9 stars, 382 reviews), "Good Old-Fashioned Pancakes" (Allrecipes, 4.6 stars, 18K reviews), and "Easy Basic Pancakes" (Martha Stewart, 3.6 stars, 4.8K reviews).

## ChatGPT: Optimizing Language Models for Dialogue

We've trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. ChatGPT is a sibling model to InstructGPT, which is trained to follow an instruction in a prompt and provide a detailed response.

I have sugar, eggs, and flour. What is the best pancake recipe?

What is the best pancake recipe for diabetics?

What type of flour yields the best pancakes?

# What is Chat-GPT?

- ...and why is it relevant to the new generation of web search engines?
  - *Chat-GPT is a **natural language processing tool** driven by **machine learning algorithms** that enables **human-like conversations** with web applications such as **search engines**.*
- OpenAI trained the language model by using Reinforcement Learning from Human Feedback
  - Human trainers provided the model with conversations to support the model in learning

# YouChat

The screenshot shows a search interface for 'how to make pancakes'. On the left, there's a sidebar with various categories like All, Chat, Images, Videos, News, Maps, For Me, Write, Code, Imagine, Study, Social, Shop, and Add. The main search area has a search bar with the query 'how to make pancakes', a magnifying glass icon, and a blue 'Sign Up' button. Below the search bar, it says '167,000,000 results'. The results are listed in a grid:

- How to Make Pancakes (with Pictures) - wikiHow**  
wikihow.com > make-pancakes  
Recipe for **Pancakes** 1 Crack the eggs into a bowl and beat until creamy. Add in the dry ingredients (excluding the salt...)
- Easy Pancakes Recipe (with Video)**  
allrecipes.com > recipe > 45396  
1 cup all-purpose flour 2 tablespoons white sugar 2 teaspoons baking powder 1 teaspoon salt, or to taste 1 cup milk 2 tablespoons vegetable oil ...
- How to Make Pancakes from Scratch – Taste of Home**  
tasteofhome.com > article > how-to-make-homemade-pancakes  
Measuring cups Measuring spoons Small mixing bowl Wooden spoon Whisk Skillet or griddle. Purchase a griddle here. Step 1...
- Good Old-Fashioned Pancakes Recipe (with Video)**  
allrecipes.com > recipe > 21014  
· Baking powder: Baking powder, a leavener, is the secret to fluffy **pancakes**. · Sugar: Just a tablespoon of white sugar is...
- How to Make Pancakes | Easy Homemade Pancakes Recipe**  
foodnetwork.com > recipes > food-network-kitchen  
1 1/2 cups all-purpose flour 3 tablespoons sugar 1 tablespoon **baking powder** 1/4 teaspoon salt 1/8 teaspoon freshly ground nutmeg 2 large...

On the right side, there's a dashed-line box containing a YouChat interface and a Wikihow interface. The YouChat box has a 'YouChat' logo and says 'Hello! My name is YouChat!' with a link 'click here to talk to me!'. The Wikihow box has a 'Wikihow' logo and shows a preview of the 'How to Make Pancakes' article with a 'Step 1' section.

Allows you to have human-like conversations with your search engine (similar to the ChatBot concept)

# Beyond Google with You.com



The AI Search Engine You Control

Start typing to search...

Introducing YouChat, talk to it here

Add You.com to Safari to get started



YOU  how to make pancakes

YouChat  how to make pancakes

To make pancakes, you will need the following ingredients: 2 cups all-purpose flour, 2 tablespoons granulated sugar, 2 teaspoons baking powder, 1/2 teaspoon kosher salt, 1 1/2 cups milk, 2 large eggs, and 1 tablespoon melted butter. To begin, mix together the dry ingredients in a medium bowl. In a separate bowl, whisk together the eggs, milk, and melted butter. Slowly add the wet ingredients to the dry ingredients, stirring in between each addition until a thick batter forms. Heat a lightly greased skillet or griddle over medium heat. Pour a 1/4 cup of batter for each pancake onto the skillet, and cook for about 2 minutes, until the edges of the pancakes are set and the bottoms are golden brown. Flip the pancakes, and cook for an additional 1 to 2 minutes, or until the other side is golden. Serve hot with desired toppings.

Good Old-Fashioned Pancakes Recipe (with Video) <https://www.allrecipes.com/recipe/21014/good-old-fashioned-pancakes/>

Easy Basic Pancakes Recipe | Martha Stewart <https://www.marthastewart.com/338185/basic-pancakes>

Everyday Pancakes Recipe - NYT Cooking <https://cooking.nytimes.com/recipes/1893-everyday-pancakes>

Ask me anything...

This product is in beta and its accuracy may be limited.  
You.com is not liable for content generated.

...which is much better than...

pancake

All Images Maps Shopping Videos More Tools

About 500,000,000 results (0.44 seconds)

Results for Potsdam - Choose area :

Recipes :

- American Pancakes – Fluffiges Originalrezept
- Good Old-Fashioned Pancakes
- Easy Basic Pancakes

Einbach Backen  
4,9 ★★★★★ (382)  
10 mins  
Z, el

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Pancakes: pancake Recipe   
Blog (206)  
3,6 ★★★★★ (4,8K)  
20 mins  
j whites, milk, flour, der

Fluffy Japanese Soufflé Pancakes   
Just One Cookbook  
4,8 ★★★★★ (1,2K)  
45 mins  
Maple syrup, cream, cup cake flour, eggs, baking powder

Okonomiyaki (Japanese Pancake)   
Closet Cooking  
No reviews  
30 mins  
Shrimp, cabbage, bacon, dried bonito flakes, pickled ginger

Show more

english pancake

All Images Videos News Shopping More Tools

About 199,000,000 results (0.47 seconds)

Recipes :

- Easy pancakes   
BBC Good Food  
4,0 ★★★★★ (548)  
30 mins  
Lemon, milk, plain flour, eggs, caster sugar
- British pancakes   
Caroline's Cooking  
4,5 ★★★★★ (8)  
25 mins  
Butter, plain flour, eggs, whole milk
- Traditional English Pancakes   
The Spruce Eats  
3,6 ★★★★★ (229)  
25 mins  
Butter, eggs, batter, all purpose flour

# Chat-GPT and YouChat

- Employ a large language model for relevance and accuracy

1.

make pancakes

To make pancakes, you will need the following ingredients: 2 cups all-purpose flour, 2 tablespoons granulated sugar, 2 teaspoons baking powder, 1/2 teaspoon kosher salt, 1 1/2 cups milk, 2 tablespoons butter (melted), 1 large egg, and 1 teaspoon vanilla extract.

To make the pancakes, first mix the dry ingredients in a large bowl: flour, sugar, baking powder, and salt. In a separate bowl, mix the wet ingredients: milk, melted butter, egg, and vanilla extract. Slowly add the wet ingredients to the dry ingredients and stir until combined.

Next, heat a skillet or griddle over medium heat and lightly grease it with butter or oil. Pour the batter onto the skillet, using a ladle or measuring cup to determine the size of the pancakes. Cook until the surface of the pancakes have some bubbles and a few have burst, about 1-2 minutes. Flip carefully with a thin spatula and cook for another 1-2 minutes until the pancakes are golden brown on both sides [1]. Serve the pancakes with butter, syrup, or your favorite toppings. Enjoy!

1. Easy Basic Pancakes Recipe | Martha Stewart  
<https://www.marthastewart.com/338185/basic-pancake-recipe>

Good Old-Fashioned Pancakes Recipe (with video) | All Recipes  
<https://www.allrecipes.com/recipe/21014/good-old-fashioned-pancakes-recipe-with-video/>

Everyday Pancakes Recipe - NYT Cooking  
<https://cooking.nytimes.com/recipes/1893-everyday-pancakes>

Pancake recipe and cooking instructions

2.

Thank you. :)

You're welcome! It's always a pleasure to help.

McDonalds Pancake Recipe - Great Freezer Recipe - Saving You ...  
<https://www.savingyoudinero.com/2013/05/05/pancake-recipe-reminds-me-of-mcdonalds/>

Homemade Pancakes Recipe (+VIDEO) - The Girl Who Ate Everything  
<https://www.the-girl-who-ate-everything.com/fluffy-pancakes/>

Birch Benders Paleo Pancake & Waffle Mix  
<https://birchbenders.com/products/paleo?bvstate=pg>

Expression of Gratitude

3.

What is the best flour to use in germany?

The best flour to use in Germany is all-purpose flour. This type of flour is made from a combination of different wheat varieties and is suitable for a wide range of baking needs. All-purpose flour is high in protein and has a light, smooth texture, making it a great choice for many German recipes.

German Pancake Breakfast (Baked) | Mel's Kitchen Cafe  
<https://www.melskitchencafe.com/german-pancake-butter-syrup/>

Gluten-Free Dutch Baby (German Pancake) - Meaningful Eats  
<https://meaningfuleats.com/gluten-free-dutch-baby-german-pancake/>

The Best Ever German Oven Pancake Recipe | The Recipe Critic  
<https://therecipecritic.com/german-oven-pancake/>

Flour type

4.

what number does all purpose flour have?

All-purpose flour is usually labeled as Type 550 in Germany. This type of flour is made from a combination of different wheat varieties and is suitable for a wide range of baking needs. All-purpose flour is high in protein and has a light, smooth texture, making it a great choice for many German recipes.

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Country specific code for the flour

- Uses logical reasoning algorithms – similar to what happens in gaming applications

# Some Drawbacks of Chat-GPT

- Inability to answer questions that are worded a specific way

what number does all purpose flour have?

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Flour type 550. Is this really correct?  
How do we know or cross-check?

why not 450?

450 is a temperature, usually referring to the temperature at which an oven is preheated. This temperature is used to bake foods such as pancakes, waffles, muffins, and banana type breads. It is important to preheat the oven to the correct temperature in order to ensure that the food is cooked correctly.

[Wheat Types of Flour and their best applications in baking](https://olabsbakery.com/wheat-flour-varieties-and-types-and-best-uses/)  
<https://olabsbakery.com/wheat-flour-varieties-and-types-and-best-uses/>

[The Best Ever German Oven Pancake Recipe | The Recipe Critic](https://therecipecritic.com/german-oven-pancake/)  
<https://therecipecritic.com/german-oven-pancake/>

[German vs American Flour Equivalents | Elle Republic](https://ellerepublic.de/en/german-vs-american-flour/)  
<https://ellerepublic.de/en/german-vs-american-flour/>

Off topic answer!



# Controversies around Chat-GPT

## ChatGPT passes MBA exam given by a Wharton professor

The bot's performance on the test has "important implications for business school education," wrote Christian Terwiesch, a professor at the University of Pennsylvania's Wharton School.

- Online exams – how to differentiate between humans and bots?
- ... and how to deal with cheating

- Multiple Choice Exam.
- Which are the most popular search engines?
  - A. Baidu
  - B. Bing
  - C. Google
  - D. All of the above

which are the most popular search engines?

The most popular search engines are Google, Bing, Yahoo, and Baidu. Google is the most widely used search engine, with a global market share of over 90%. Bing is the second most popular search engine, with a global market share of around 10%. Yahoo and Baidu are the third and fourth most popular search engines, respectively, with global market shares of around 2-3%.

Fast No Knead Bread, Faster Dutch Oven Bread, Crusty Bread ...  
<https://www.jennycancook.com/recipes/faster-no-knead-bread/>

Understanding flour types Weekend Bakery  
<https://www.weekendbakery.com/posts/understanding-flour-types/>

How to Make Canele | The Perfect Loaf  
<https://www.theperfectloaf.com/canele/>





# Inside the Belly of a Search Engine

**Dr. Anne Kayem**

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