SERPACT

EUROPEAN 2019 SEARCH AWARDS

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SHORT LISTED

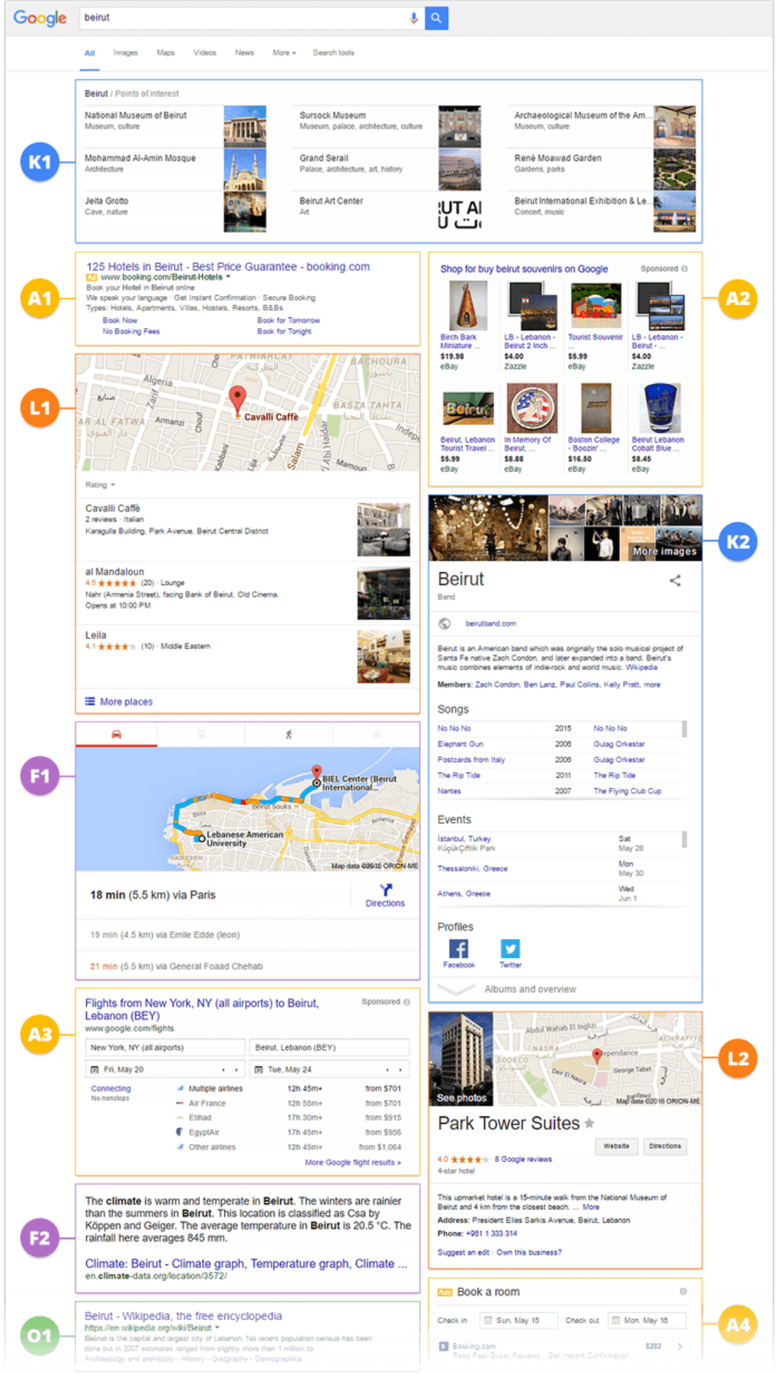
SERP SEO & Semantic Content Optimization Hand-in-Hand

Prepared by Dido Grigorov, Head of SEO

Today's Discussion

Outline of Topics

- What is the new SERP SEO?
- SERP SEO Elements
- Why they are important?
- How to get there? Semantic SEO
- What is Semantic Search
- Semantic SEO begins with Semantic Keyword Research
- Steps of doing semantic keywords
- What is Bag of Words?
- What are ngrams?
- What is Part of Speech?
- What are Named Entities?
- Core keywords, Stemming keywords, Supporting keywords
- Word Associations
- Topic Tagging
- Text Classification
- Text Similarity
- Language Modeling and Semantic Keyword Research
- TF-IDF
- Calculating Co-Occurence
- Topic Modeling
- Content optimization - on page tips and tricks
- Content optimization - text tips and tricks
- Content optimization and Google Search Quality Rating Guidelines



What is the new SERP SEO?

So how can SEO professionals stay effective when the SERPs are becoming more competitive?

- Search engine result pages (SERPs) are more competitive than ever.
- We're starting to see many different types of media elements ranking.
- The decline of organic traffic for top performing keywords is rooted in the presence of new elements on Page 1.
- The organic Position 1 is now often bumped low behind ads, maps, media elements, and featured snippets.
- We, therefore, call these elements "position zero" because they outrank even the top organic results.
- One of the most competitive versions of SERPs is zero-click searches.
- A **zero-click SERP is one where the answer is displayed directly on the search results** page satisfying the search intent of the user without having to click further.

SERP SEO Elements

What are they?

- Knowledge Graph results - *Carousel, Brand*
- Google Ads - *Top / Bottom*
- Local Search Results - *Google My Business*
- Featured Snippets - *Zero Result*
- Organic Results

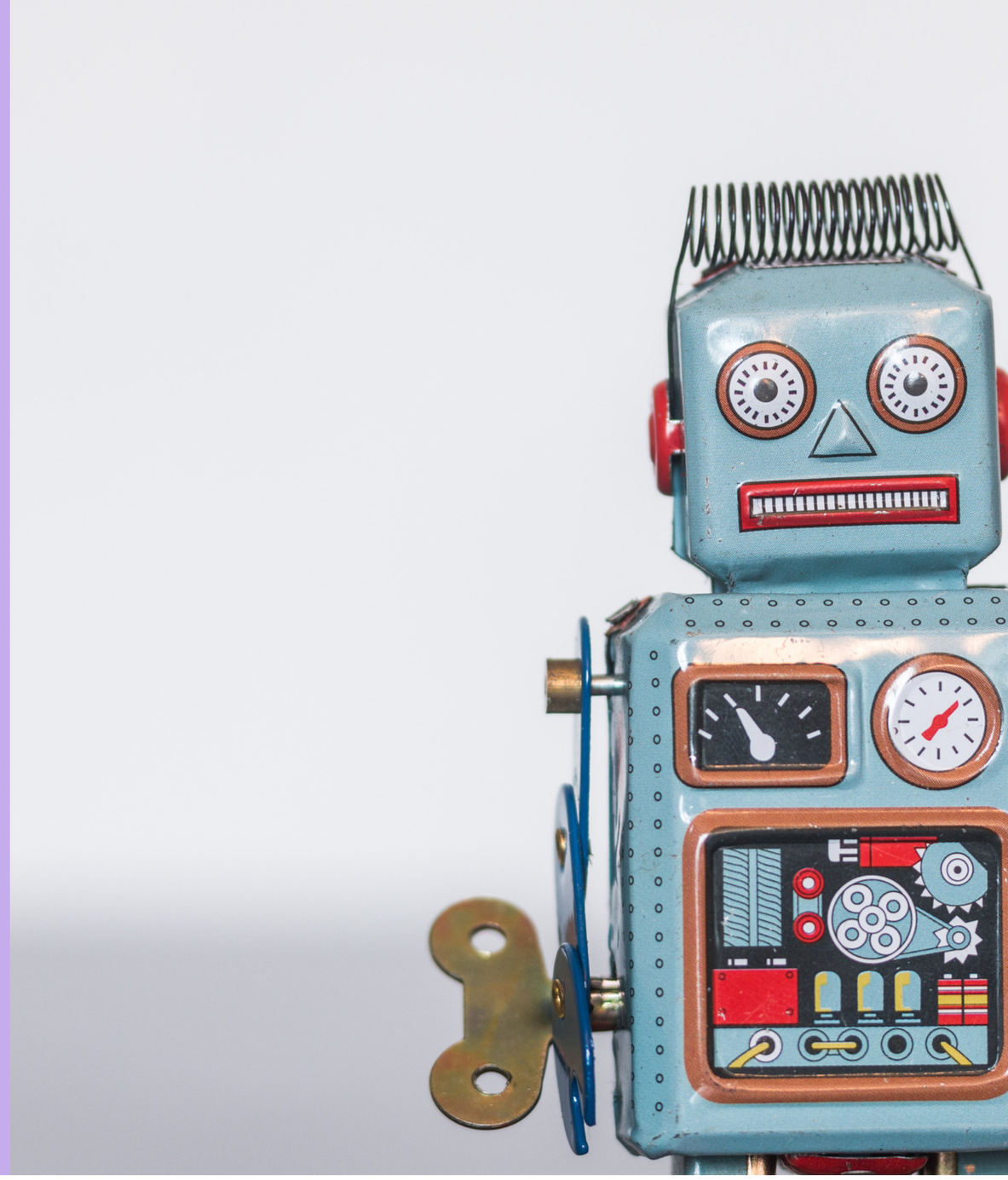
When doing your keyword research, defining your target pages and selecting target search terms, there's one important mindset shift to make to future-proof your SEO strategy:

- Search terms & Intent.
- Monthly search volumes.
- Keyword difficulty
- The presence of featured snippets
- Other media elements

A good question...

How To Get There?

ANSWER: SEMANTIC SEO



What is Semantic Search?

Semantic search is a data searching technique in a which a search query aims to not only find keywords, but to determine the intent and contextual meaning of the the words a person is using for search.

Semantic search provides more meaningful search results by evaluating and understanding the search phrase and finding the most relevant results in a website, database or any other data repository.

"dalmatian" and "dog" are semantically related.
"dalmatian" and "spotted" are more closely related than "dog" and "spotted."
"dalmatian" is more frequently capitalized than other nouns.
"spotted" can mean "seen" or "dotted."

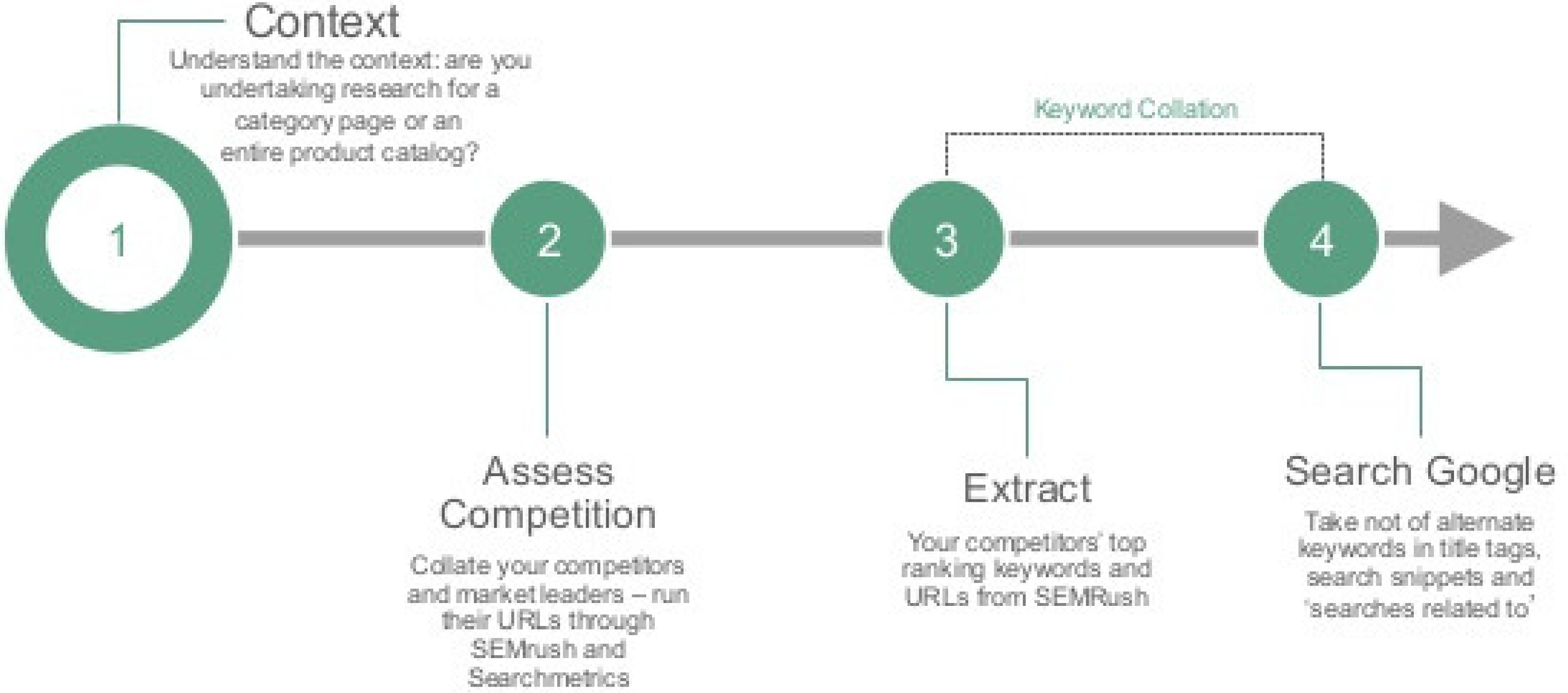
Semantic SEO begins with Semantic Keyword Research

Steps of doing semantic keywords

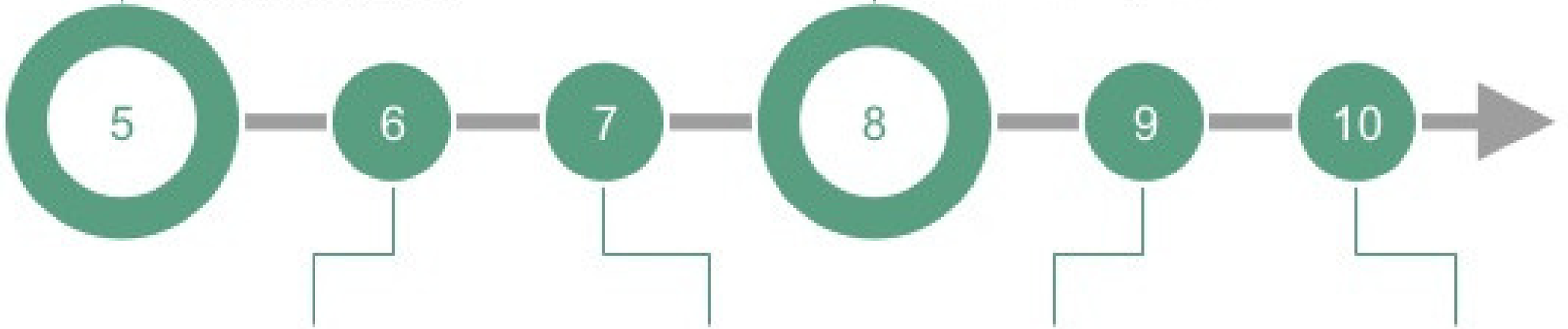
Different types of keywords according to the:

- According to consumer expectations - information, navigation, transaction, commercial
- According to their length - short-tail, long-tail
- According to the brand - branded or connected to the brand
- Separated by different classifiers - color, size, volume, shape
- According to the trend - seasons, appearing for a certain period of time (short or long term), evergreen keywords
- Product Defined
- Profile of the ideal buyer defining
- Geo-targeting keywords
- Wrong spelling words
- Semantic words - related phrases, co-occurrence phrases, generic, stemming, supporting, synonyms and close Variants, entities
- Distributed to the customer journey stages
- **Core keywords, Stemming keywords, Supporting keywords**

Semantic Keyword Research **Timeline**



Semantic Keyword Research **Timeline**



Extrapolate

the most relevant and highest traffic keywords and enter them into Google Keyword Planner

SEMrush

Plug these keywords into SEMrush and view the 'related keyword' list.

Assess Competition

Collate competitors and market leaders – run their URLs through SEMrush and Searchmetrics

Keyword Collation

View the 'organic positions' report in SEMrush and start **extracting non-phrase match keywords**

Extract

On a spreadsheet – list these 'related' keywords as complementary keywords to your 'core' keyword

Semantic Keywords

Provide your copywriter with these semantically related keywords – that should be mentioned at least once in your copy in natural language targeted to shoppers.

Also use them as anchor text in your internal link strategy

Natural Languge Processing - a syntactic analysis is used to assess how the natural language aligns with the grammatical rules

- ***Lemmatization: It entails reducing the various inflected forms of a word into a single form for easy analysis.***
- ***Tokenization - separating sentences in words and make predictions about the meaning of the sentence***
- *Morphological segmentation: It involves dividing words into individual units called morphemes.*
- *Word segmentation: It involves dividing a large piece of continuous text into distinct units.*
- *Part-of-speech tagging: It involves identifying the part of speech for every word.*
- *Parsing: It involves undertaking grammatical analysis for the provided sentence.*
- *Sentence breaking: It involves placing sentence boundaries on a large piece of text.*
- *Stemming: It involves cutting the inflected words to their root form.*

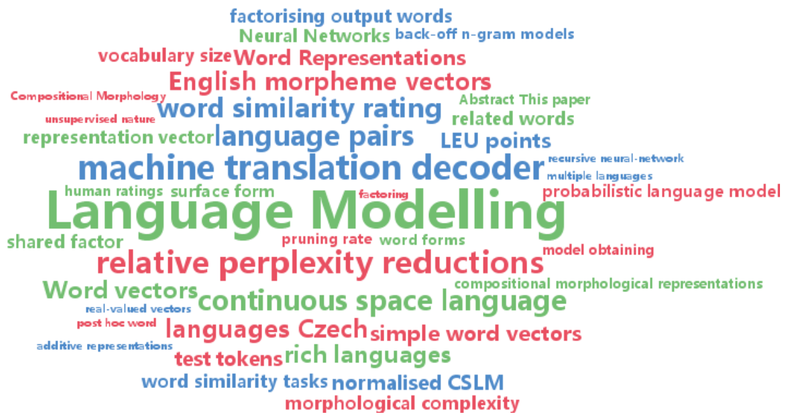
What is Bag of Words?

The bag-of-words model is a simplifying representation used in natural language processing and information retrieval (IR). In this model, a text (such as a sentence or a document) is represented as the bag (multiset) of its words, disregarding grammar and even word order but keeping multiplicity. The bag-of-words model has also been used for computer vision.

The bag-of-words model is commonly used in methods of document classification where the (frequency of) occurrence of each word is used as a feature for training a classifier.

An early reference to "bag of words" in a linguistic context can be found in Zellig Harris's 1954 article on Distributional Structure.[3]

What is Language Modelling?



- A statistical language model is a probability distribution over sequences of words. Given such a sequence, say of length m, it assigns a probability to the whole sequence.
- The language model provides context to distinguish between words and phrases that sound similar. For example, in American English, the phrases "recognize speech" and "wreck a nice beach" sound similar, but mean different things.

What is language modelling - p.2?

- Estimating the relative likelihood of different phrases is useful in many natural language processing applications, especially those that generate text as an output. Language modeling is used in speech recognition, machine translation, part-of-speech tagging, parsing, Optical Character Recognition, handwriting recognition, information retrieval and other applications.
- In speech recognition, sounds are matched with word sequences. Ambiguities are easier to resolve when evidence from the language model is integrated with a pronunciation model and an acoustic model.
- Language models are used in information retrieval in the query likelihood model. There a separate language model is associated with each document in a collection. Documents are ranked based on the probability of the query Q in the document's language model . Commonly, the unigram language model is used for this purpose.

A good question

What is n-gram model?

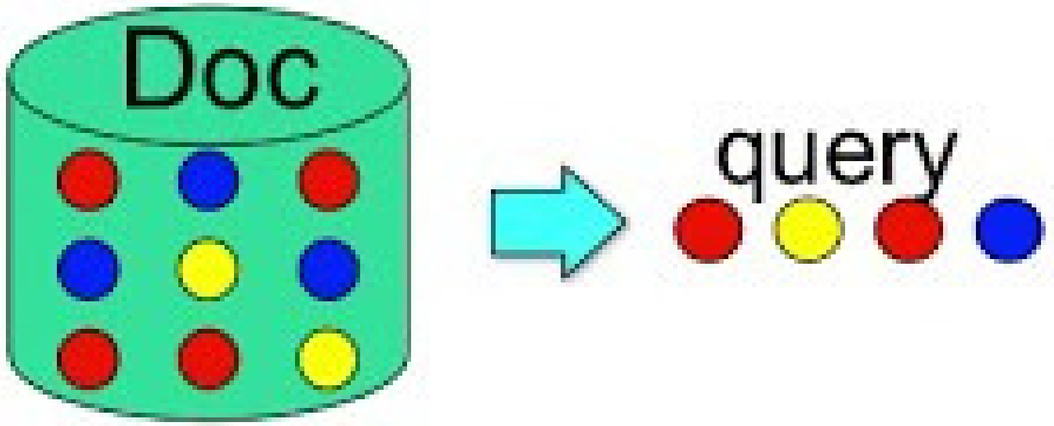
UNIGRAM

A unigram model can be treated as the combination of several one-state finite automata. It splits the probabilities of different terms in a context, e.g. from to .

In this model, the probability of each word only depends on that word's own probability in the document, so we only have one-state finite automata as units. The automaton itself has a probability distribution over the entire vocabulary of the model, summing to 1.

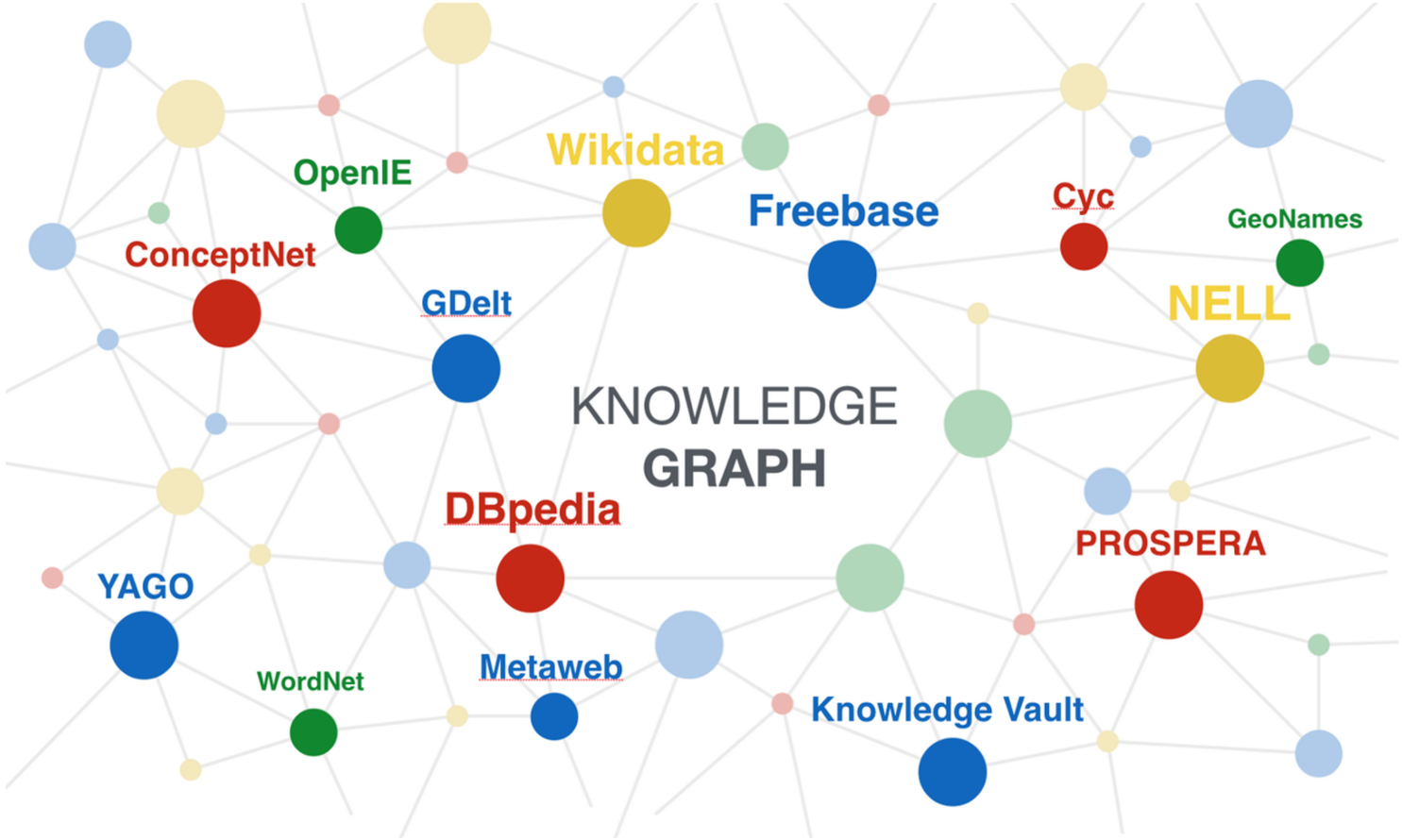
Unigram Language Models

- words are "sampled" independently of each other
  - metaphor: randomly pulling out words from an urn (w. replacement)
  - joint probability decomposes into a product of marginals
  - estimation of probabilities: simple counting



P(● ● ● ●) = P(●) P(●) P(●) P(●)

Knowledge Graph



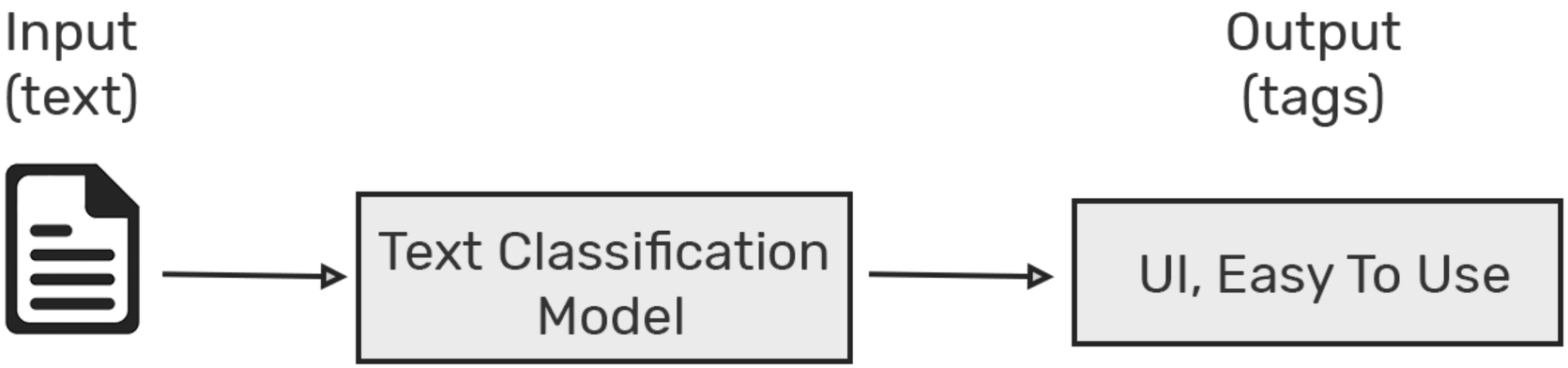
Text Classification

Text classification (a.k.a. text categorization or text tagging) is the task of assigning a set of predefined categories to free-text. Text classifiers can be used to organize, structure, and categorize pretty much anything. For example, new articles can be organized by topics, support tickets can be organized by urgency, chat conversations can be organized by language, brand mentions can be organized by sentiment, and so on.

As an example, take a look at the following text below:

“The user interface is quite straightforward and easy to use.”

A classifier can take this text as an input, analyze its content, and then and automatically assign relevant tags, such as UI and Easy To Use that represent this text:



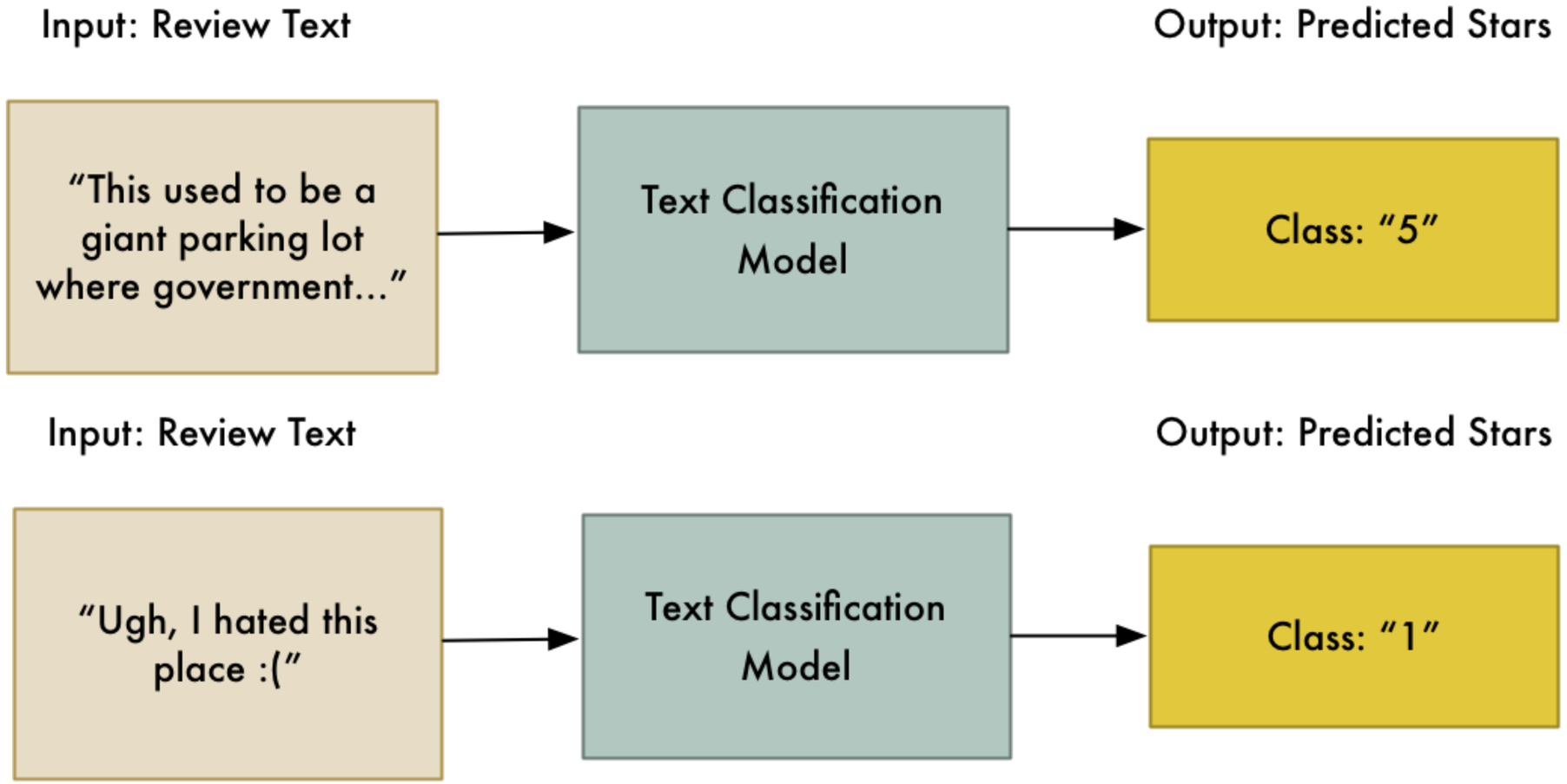
Text Classification

With text classification, the algorithm doesn't care whether the user wrote standard English, an emoji, or a reference to Goku. The algorithm is looking for statistical relationships between input phrases and outputs. If writing ಠ_ಠcorrelates more heavily with 1-star and 2-star reviews, the algorithm will pick that up even though it has no idea what a "look of disapproval" emoticon is.

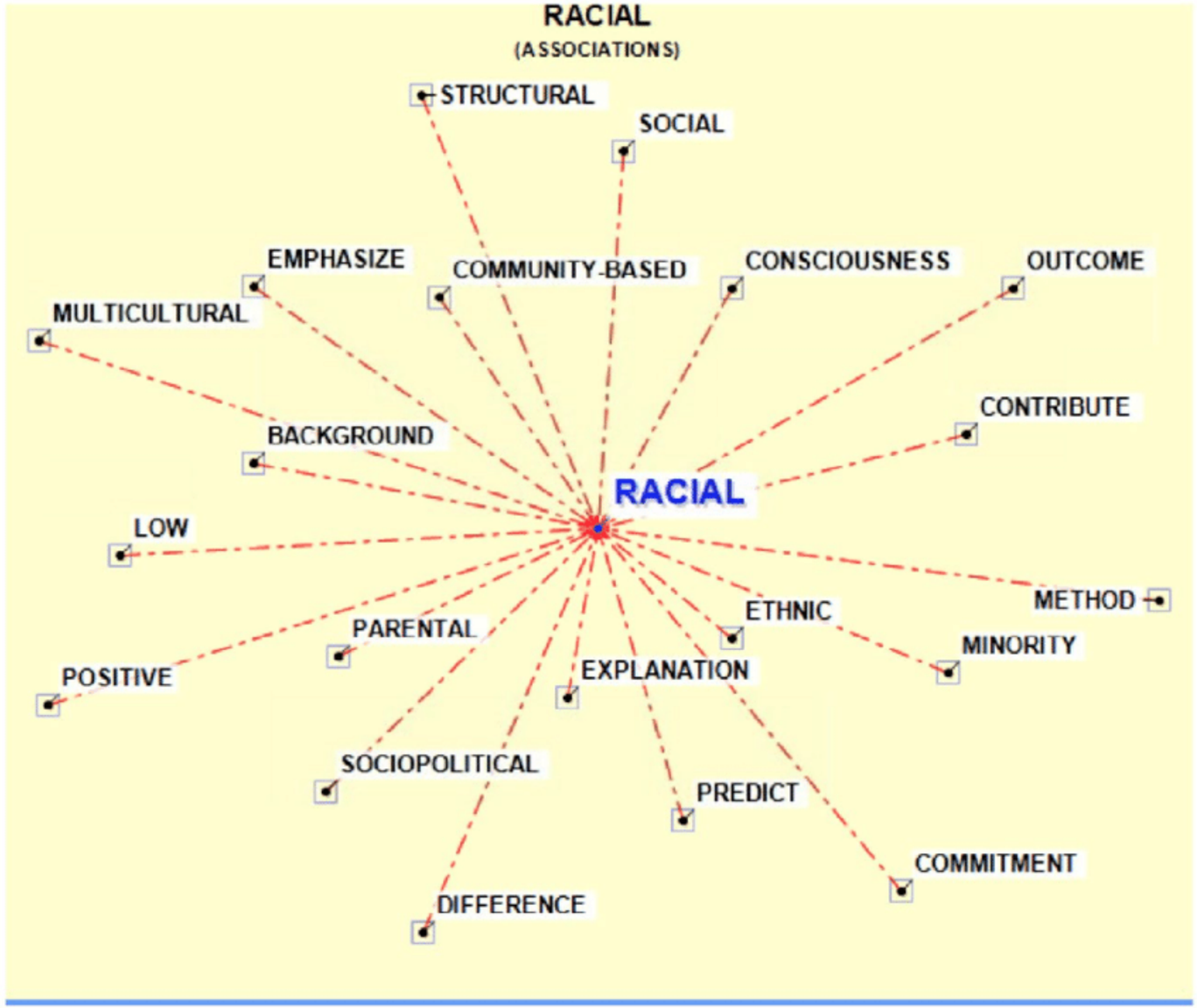
Word	One hundred numbers that encode the "meaning" of each word →																
i	-0.010	0.118	-0.026	-0.097	0.097	0.078	-0.148	0.064	0.086	-0.056	0.029	0.084	-0.124	0.141	-0.139	0.072	0.013
didn	-0.024	0.029	-0.015	-0.025	-0.017	0.034	-0.082	0.062	-0.020	0.033	0.008	0.001	0.021	-0.022	-0.060	-0.038	-0.006
'	-0.041	-0.178	0.081	0.112	0.101	0.044	-0.114	0.186	0.150	0.049	-0.019	0.125	-0.108	0.156	-0.254	0.025	-0.068
t	0.017	0.049	-0.051	-0.055	0.013	0.052	-0.066	0.027	0.009	-0.025	0.018	0.078	-0.062	0.032	-0.046	0.092	-0.034
love	0.051	0.315	-0.035	-0.191	0.243	0.181	0.026	-0.286	0.201	0.320	-0.242	-0.137	0.189	-0.049	0.242	-0.156	0.063
this	0.068	-0.051	-0.022	0.054	0.142	0.112	0.016	-0.046	0.158	0.054	-0.039	0.155	-0.112	0.177	-0.092	0.134	-0.066
place	-0.016	0.017	-0.032	-0.052	0.022	0.065	-0.034	-0.043	-0.010	0.051	-0.002	-0.002	0.034	-0.002	0.060	0.014	-0.009
:	-0.060	0.003	-0.034	-0.042	-0.059	0.021	-0.118	0.106	-0.059	0.044	0.043	-0.013	0.041	-0.037	-0.085	-0.051	-0.013
(	-0.061	-0.062	0.028	0.000	0.036	-0.019	-0.065	0.100	0.062	-0.056	0.028	0.066	-0.100	0.100	-0.205	0.025	-0.040

Text Classification

Instead of analyzing sentence structure and grammar, we'll just look for statistical patterns in word use.



Word Associations



Co-occurence

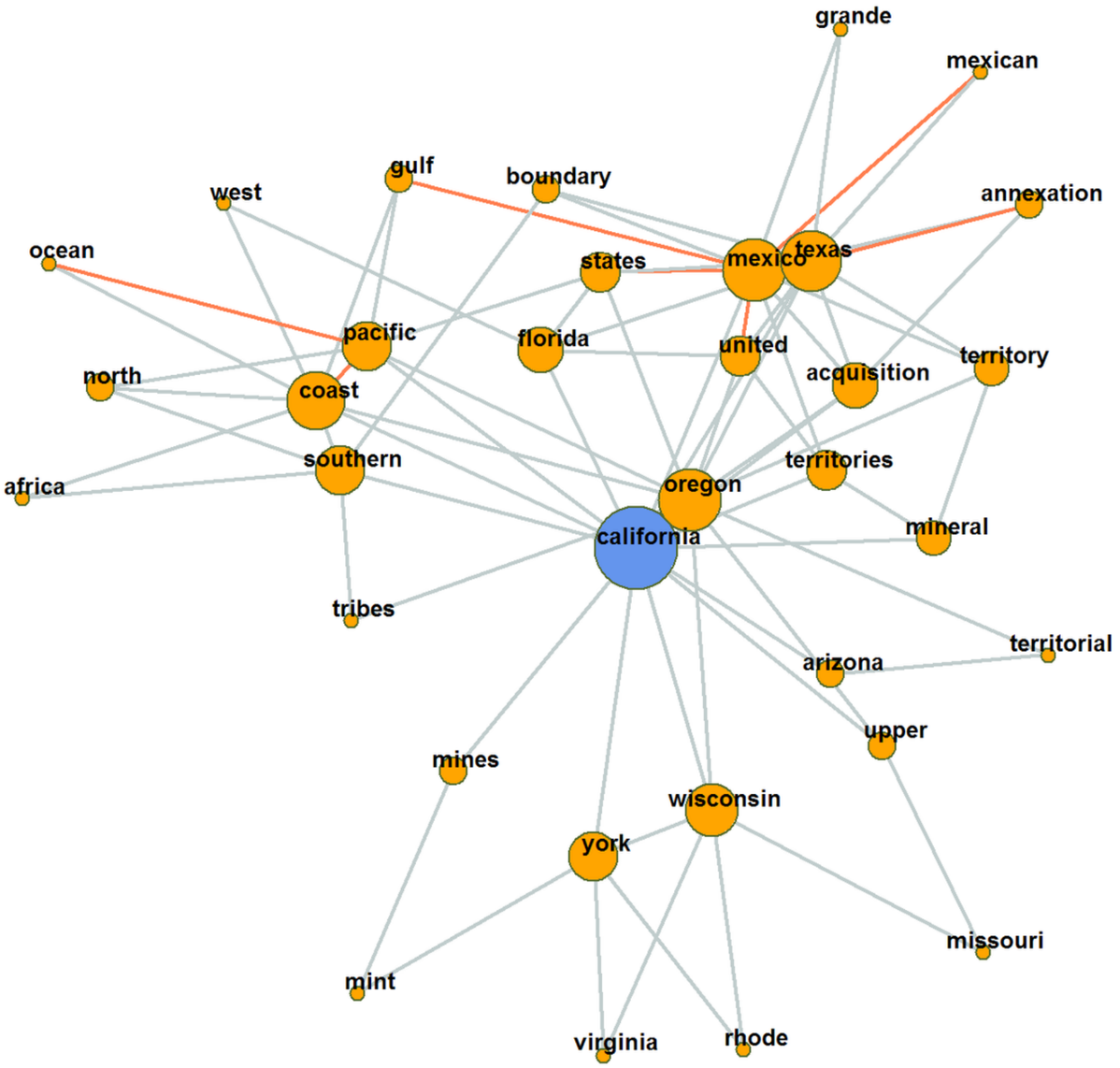
1 Sentence detection

2 Counting co-occurrences

3 Statistical significance

```
##                home introduction inventions manufactures
## home            698            5          1           11
## introduction      5           54          1            1
## inventions        1            1         18            1
## manufactures     11            1          1          160
```

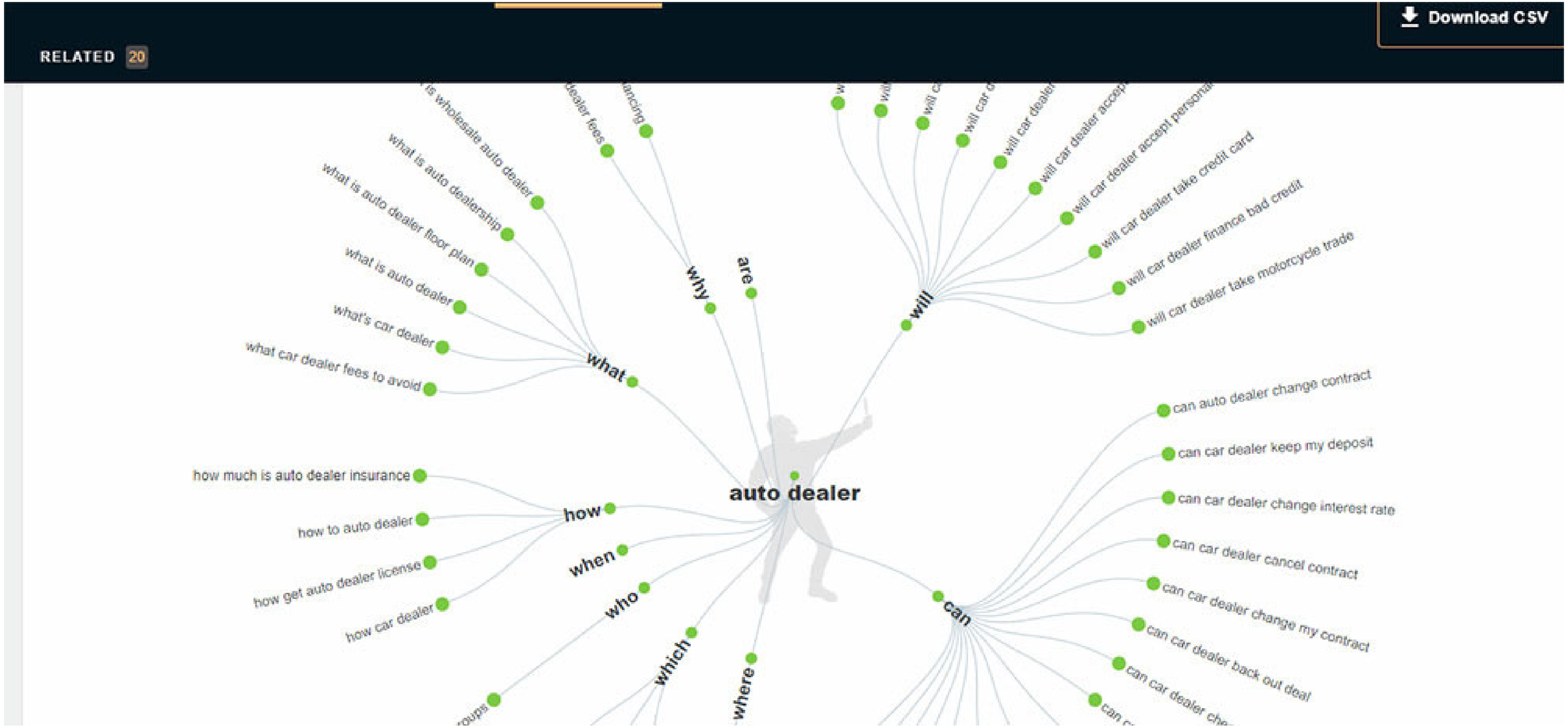
california Graph



Google Search Quality Raters Guidelines

- E-A-T
- YMYL

Content Optimization and Knowledge Graph and SERP elements



Keyword Magic Tool: List 34

Go to Keyword Analyzer | All lists 34

shoes | + New keyword

shoes | US | Apply | Broad Match | Phrase Match | Exact Match | Related

All | Questions | Advanced filters

By num of keywords | By volume

All keywords	2,529,164
men	132,136
size	123,332
women	122,171
nike	115,385
run	113,871
best	72,950
black	71,653
adidas	60,034
store	59,634
dress	49,713
white	49,677

Total volume of all keywords.

All keywords

Total volume **93,174,260** | Average difficulty **8.92%**

Export | + Add to Keyword Analyzer

Keyword	Volume	Trend	KD	CPC	Com.	SERP Feat.	Results in SERP
shoes	1,220,000		87.31	1.55	0.59	4	6.3B
nike shoes	1,000,000		84.75	0.72	1	5	98
shoe carnival	823,000		88.83	0.08	0.26	7	100
adidas shoes	673,000		84.76	0.9	1	6	721M
jordan shoes	450,000		77.65	0.74	1	4	665M
payless shoes	368,000		88.04	0.14	0.45	3	7.4M
dsw shoes	301,000		78.47	0.17	0.85	6	11.3M
rack room shoes	301,000		68.45	0.16	0.26	3	88.4M
basketball shoes	246,000		85.58	1.04	1	4	651M

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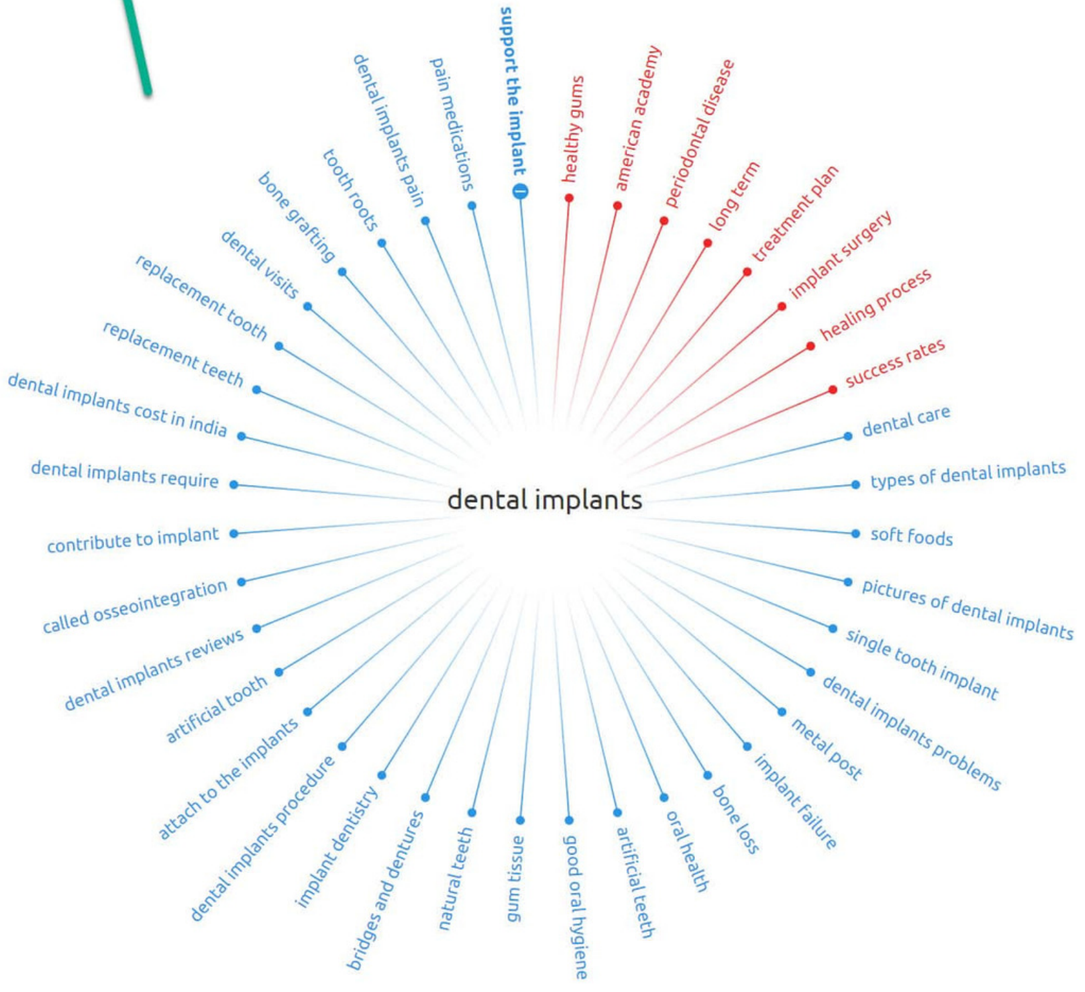
Topic Research: dental implants

new | Export topic to XLSX

Content Ideas | Favorite Ideas

dental implants | United States (Desktop) | Search content on domain | Get content ideas

Cards | Explorer | Overview | Mind Map



All Tools

- Dashboard
- SEO Dashboard BETA
- Domain Analytics
- Keyword Analytics
- Projects
- Marketing Insights
- Gap Analysis
- Topic Research NEW
- SEO Content Template
- SEO Writing Assistant BETA
- Lead Generation Tool
- Listing Management NEW
- CPC Map BETA
- My Reports

MANAGEMENT

- My Reports +
- Projects
- Lead Generation Tool
- Marketing Calendar
- Notes

- Online demo
- SEOquake for your browser
- Join our Affiliate Program
- Order custom database or report

Content optimization summary tips

- Use actionable speech
- Use h1, h2, h3 subheadings and create hierarchy of the content
- Use natural language phrases
- Research what your audience use in the form of phrases on the web
- Synonyms and Close Variants
- Semantic Distance and Term Relationships
- Phrase-Based Indexing
- Be clear with your topic
- Answer your current, its pre & post questions
- Use entities
- Use short paragraphs
- Provide clear answers
- Avoid too difficult words and sentences
- Be clear and descriptive with your titles
- Optimize your images properly - **alt tags, image titles, surrounding texts, captions**
- Add videos