SWARM.



Empowering Human-Al Collaboration: Leveraging Knowledge Graphs, Al, and SEO for **Enhanced Content Optimization**

Beatrice Gamba

Human + Al Symposium - July 2024



Beatrice Gamba

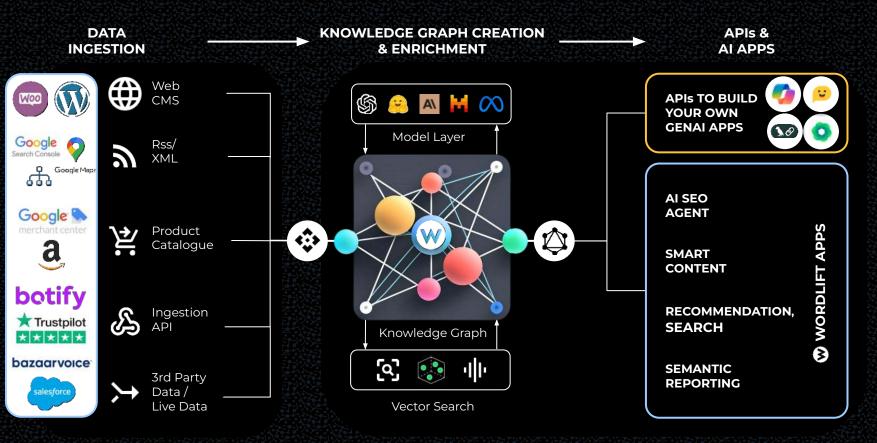


Beatrice Gamba

Head of Innovation

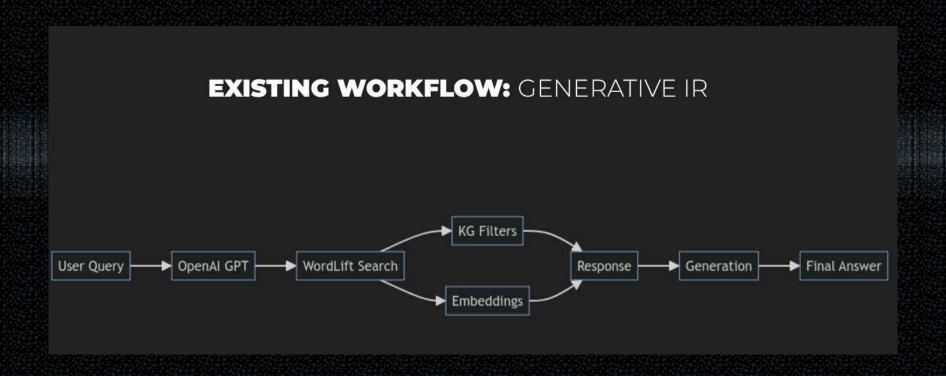


A LARGE ACTION MODEL for MARKETING AUTOMATION



The Knowledge Graph is at the center of the AI models that we build for our clients.

It is a way to ground the model with reliable data.





THE STAR WARS-LIKE AGI ISN'T GOING TO HAPPEN SOON

LLMs are applied statistics – they don't have true knowledge. LLMs can understand that an entity appears millions of times across the web, but have no understanding of the world.

Stefan Weitz Former Director of Bing

Gen Al adoption is most common in the functions where it can create the most value. Adoption in mktg and sales has doubled since



Companies are turning to Practical AI to achieve tangible results that can be deployed and scaled within the business.

Outcomes

Insights

Scalability

Responsibility

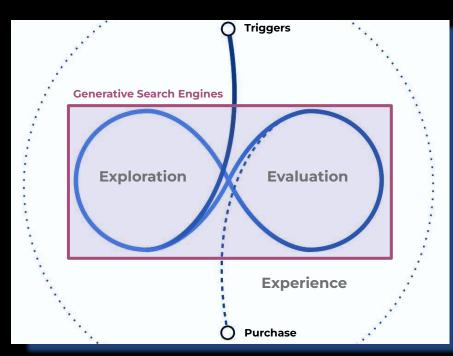
Human-centered Al combines the human ability to learn, plan and socialize, with the Al power of automation.

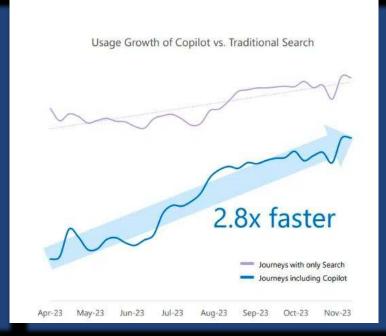
The process is backed up by knowledge graph and validation for efficient results using minimal resources.



The new age of content

Al is designed to Search faster







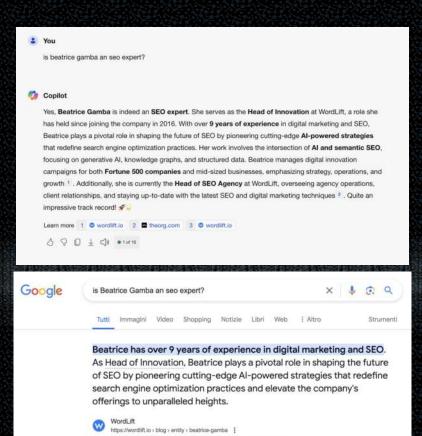
Setting a new standard for digital presence

Integrating structured data and publishing good content unlocks the full potential for increasing a website's online visibility.

Setting a benchmark for quality in the digital age

In the era of Al-generated content, publishing highly personalized and accurate information represents a transformative act for the web community.





Beatrice Gamba - Head of Innovation - WordLift

@id	http://data.wordlift.io/wl0216/entity/b-23977#article
description	Who is Beatrice Gamba? Beatrice Gamba is Head of Innovation at WordLift. Born
	and raised in Rome, Beatrice joined WordLift's team in 2016, after a 3-year
	experience in Berlin, where she worked for a big e-commerce company.Beatrice
	has over 9 years of experience in digital marketing and SEO. As Head of Innovation,
	Beatrice plays a
mainEntityOfPage	https://wordlift.io/blog/en/entity/beatrice-gamba/
headline	Beatrice Gamba
sameAs	https://twitter.com/geatricebi
sameAs	https://www.crunchbase.com/person/beatrice-gamba
sameAs	https://wordlift.io/ng/author/beatrice/
sameAs	https://voicesofsearch.com/episode/knowledge-graph-seo-beatrice-gamba-
	wordlift-beatrice-gamba-wordlift-beatrice-gamba-wordlift/
sameAs	https://data.wordlift.io/wl82991/entity/beatrice-gamba-11090
sameAs	https://data.wordlift.io/wl82989/entity/beatrice-gamba-9910
sameAs	https://www.knowledgegraph.tech/speakers/beatrice-gamba/
sameAs	https://theorg.com/org/wordlift/org-chart/beatrice-gamba
sameAs	https://kalicubetuesdays.com/entity/beatrice-gamba/
sameAs	https://g.co/kgs/a8CnXQ
sameAs	https://www.youtube.com/watch?v=eub2aOt3FGg
sameAs	https://www.youtube.com/watch?v=EGUfymrsYjo
sameAs	https://kalicubetuesdays.com/2023/august-2023/kalicube-tuesdays-with-beatrice-
	gamba/
sameAs	https://blog.marketmuse.com/seo-in-times-of-crises/
sameAs	https://www.youtube.com/watch?v=VJQf_7-DJPQ
sameAs	https://www.imdb.com/name/nm15459230/
sameAs	http://tesi.luiss.it/9863/
sameAs	https://www.linkedin.com/in/beatrice-gamba/
sameAs	https://zenodo.org/records/11472415
sameAs	https://zenodo.org/records/7896145
sameAs	https://www.mainstreetroi.com/seo-structured-data-age-of-ai/
sameAs	https://www.youtube.com/watch?v=xA_vSkTmOIY
datePublished	2023-02-08T11:48:33+01:00
dateModified	2024-06-07T10:27:31+02:00
wordCount	353
commentCount	0
inLanguage	en-US
image	
@type	ImageObject
	https://esfjz3kkrvq.exactdn.com/blog/en/wp-

Building the authority of a business or a person as a credible player in their domain by providing all the information about them in one place in the form of metadata.

This is the place to be for marketers and content creators







Users might struggle to find specific information due to Al-generated content overload.



HUMAN-AI COLLABORATION PARADOX

Al can be used to curate content and personalize recommendations for users.



Content Generation

Questions and Answers

Product Descriptions

Product Highlights

Questions and Answers - Prompt



You 12:08

The objective is to generate a set of 4 questions and answers for this page: https://www.eyebuydirect.com/prescription-lens/digital-protection

Instructions:

Research the top rankers and main competitors on the keyword "digital protection lenses" and provide me with a content gap analysis and list the entities behind the top content.

Based on the gap analysis from step 1, create four FAQs for the page.

Ensure the questions and answers are comprehensive, informative, and engaging.

Base the FAQs on long-tail keywords that the page is ranking for. Use these long-tail keywords to ensure the FAQs address specific user queries and concerns.

Base the tone of voice of the generated FAQs on the tone of voice of the texts of the page and base your texts on the choice of words of the page.

Competitor & Entity Analysis

Long tail keyword Analysis

Assess the Tone of Voice

Questions and Answers - Result

Content Gap Analysis

Entities Present in Top-Ranking Content for "Digital Protection Lenses":

- 1. Lenses: Frequently mentioned in top-ranking content.
- 2. Digital Protection Lenses: Not explicitly mentioned in the analyzed content.
- Lens: Commonly referenced.
- 4. Eyedrops: Not mentioned in the analyzed content.
- 5. Eye Strain: Frequently mentioned in top-ranking content.

Entities Present in the Eyebuydirect Page:

- 1. Blue Light: Mentioned once.
- 2. UV: Mentioned once.
- 3. Turquoise: Mentioned once.
- 4. Blue-violet: Mentioned once.
- 5 ISO: Mentioned once

Content Gap Insights:

- The Eyebuydirect page lacks mentions of "digital protection lenses" and "eyedrops," which are relevant entities in top-ranking content.
- The page does not emphasize "eye strain" as much as top-ranking competitors do.
- The page includes mentions of "blue light" and "UV," which are relevant but not as frequently mentioned as "lenses" and "eye strain."

FAQs Based on Long-Tail Keywords and Content Gap Analysis

FAQ 1: What are digital protection lenses?

Answer: Digital protection lenses are specially designed lenses that help reduce eye strain and discomfort caused by prolonged exposure to digital screens. These lenses filter out harmful blue light emitted by devices such as computers, smartphones, and tablets, providing a more comfortable viewing experience and protecting your eyes from potential damage.

FAQ 2: How do digital protection lenses help with eye strain?

Answer: Digital protection lenses help alleviate eye strain by filtering out blue light and reducing glare from digital screens. This minimizes the amount of harmful light that reaches your eyes, allowing you to work or play on your devices for longer periods without experiencing discomfort or fatigue. Additionally, these lenses can improve contrast and clarity, making it easier to focus on your screen.

FAQ 3: Can digital protection lenses be used with prescription glasses?

Answer: Yes, digital protection lenses can be incorporated into prescription glasses. This means you can enjoy the benefits of blue light protection while also correcting your vision. Whether you need single vision, bifocal, or progressive lenses, digital protection can be added to your prescription to provide comprehensive eye care.

FAO 4: Are there any side effects of using digital protection lenses?

Answer: Digital protection lenses are generally safe and do not have any significant side effects. Some users may initially experience a slight adjustment period as their eyes get used to the new lenses. However, this is typically temporary and should not cause any long-term issues. If you experience persistent discomfort, it's advisable to consult with an eye care professional.

These FAQs are designed to address common user queries and concerns, leveraging long-tail keywords and ensuring the content is comprehensive, informative, and engaging.

Al-Generated Product Descriptions

We start with analyzing the **industry** of the client and the **features of the products** sold on the site.

The SEO team selects the essential product attributes that need to be mentioned in the descriptions.

We make sure that the generated content is **SEO friendly** and contains the **information that the users are looking for**.

productName brand productMainCategory applicationGuidelines suitability benefits mainIngredients **featuredComponents** finish targetPart purpose durationOfEffect **timeForResults** spfRating waterProof dermatologicallyTested

Example of attributes typical of the beauty industry



Al-Generated Product

We ground the AI model to the knowledge graph to avoid hallucinations and we add the identified attributes to the prompt to generate the final description.

Keep the completion as one paragraph. Keep the intro sentence short - 13 words max. Start the intro sentence with the product name. Never mention the product name more than once in the whole description. The completion should strictly be between 80 and 110 words. Include all the attributes: PRODUCT NAME is a Softeners & Balancing Lotions. This product consists of Two types of Hyaluronic Acid: Infuses skin with moisture for 24 hours, while supporting moisture retention and protecting skin. Vitamin C: A potent and stable form of the vitamin, Ethyl Ascorbic Acid, boosts radiance for a bright, even-toned complexion. Fermented Kefir Extract: This exclusive prebiotic promotes skin's turnover cycle while strengthening the barrier function. Yuzu Extract: Recharges skin's moisture. This product is applied to Face. This product helps with Hydration, brightening, evening complexion. The benefits of this product include Infuses skin with two types of Hyaluronic Acid to stay moisturized for 24 hours. Targets dark spots and brightens skin with Vitamin C. Promotes skin's turnover cycle while strengthening the barrier function with exclusive prebiotic Fermented Kefir Extract. Recharges moisture with Yuzu Extract. Revolutionary packaging combines the bottle forming and filling process into one step, helping reduce CO2* and refill system helps reduce plastic by 92%. The product applies: Apply daily, in the morning and evening after cleansing. Apply with Facial Cotton for additional exfoliation and absorption allowing for maximum benefits. Smooth gently over skin. For an even more effective application. tap gently into skin with your fingers to increase activation. For Refill: To refill, remove cap. Remove ring part from reusable outer bottle. Then pull up the ring from the used inner bottle. Keeping ring level, push it down onto new refill bottle until it clicks in place. Insert refill into the outer container. Remove the refill cap and replace with outer bottle cap.

Al-Generated Product

All the texts are then validated by our content team and sent to the client for approvals.

We take into account the specifications of the industry and the attributes that make the product more attractive to potential buyers.

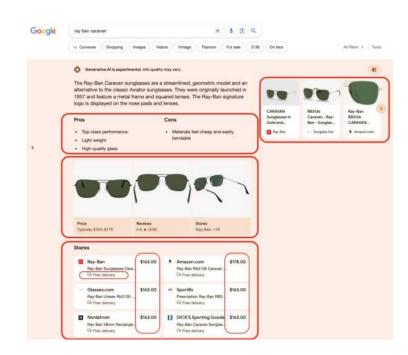
PRODUCT NAME is a luxurious, nourishing softener that moisturizes with two types of Hyaluronic Acid for 24-hour hydration. Ethyl Ascorbic Acid, a stable form of Vitamin C, brightens the complexion and targets dark spots for an even-toned glow. The formula with Fermented Kefir Extract boosts the skin's turnover cycle and barrier function, while Yuzu Extract recharges moisture. Refillable, eco-friendly packaging reduces CO2 emissions and plastic. Apply with Facial Cotton morning and evening after cleansing for maximum benefits.

Al-Generated Product Highlights

Product Highlights are short bulleted lists that summarize the **most relevant product features**.

The aim of this list is to let shoppers scan quick bits of information that answer common questions or focus on the most important attributes of the product.

The list needs to be uploaded inside Google Merchant Center, and it is not visible to the end user.



This implementation is scalable and impacts the bottom line.

The information is retrieved from the knowledge graph.



Find me everything on the website on the Ray-Ban RB3565. Based on this information write me a short bulleted lists of the most relevant highlights of your products. The highlights you provide should help shoppers with easily consumable, quick-to-scan sentence fragments that answer the most common consumer questions or that focus on the most important attributes of the product.

Do not mention discounts and ensure that the provided content complies with data privacy regulations.



→ Wordlift Search API



Agent WordLift 04:52 PM

Based on the information gathered from the Ray-Ban website, here are the most relevant highlights of the Ray-Ban RB3565 sunglasses:

- Frame Options: Available in various metal frame colors including Gold, Copper, and Black.
- · Lens Options: Choose from different lens colors such as Pink/Brown, Clear/Blue, and Black.
- Prescription Availability: Prescription lenses are available for customization.
- · Customization: Options to design your own shades or glasses, including frame, lenses, and engraving.
- . Transitions® Lenses: Available with Transitions® lenses that adapt to changing light conditions.
- · Unisex Design: Suitable for both men and women.
- · Free Shipping and Returns: Enjoy free next-day delivery and free returns on your purchase.
- . In-Store Pickup: Option to buy online and pick up in store with the help of the store team.

These highlights provide a quick overview of the key features and options available for the Ray-Ban RB3565 sunglasses, helping shoppers make informed decisions.







SEO Tasks

SEO Titles & Meta description

Internal Links



You 15:55

Can you generate SEO titles of 56 characters and meta descriptions of 156 characters taking into consideration the ranking keywords behind each page, for the following pages:

https://wordlift.io/blog/en/entity/beatrice-gamba/ https://wordlift.io/blog/en/structured-data-for-events/





Agent WordLift 15:56

Based on the analysis of the entities and keywords behind each page, here are the SEO titles and meta descriptions:

Page: Beatrice Gamba

SEO Title (56 characters):

"Beatrice Gamba: SEO, AI, and Digital Marketing Expert"

Meta Description (156 characters):

"Discover Beatrice Gamba's expertise in SEO, AI, and digital marketing. Learn how she leverages knowledge graphs and content marketing for e-commerce success."

Page: Structured Data for Events

SEO Title (56 characters):

"Structured Data for Events: Boost SEO with Knowledge Graphs"

Meta Description (156 characters):

"Learn how structured data for events can enhance SEO and organic traffic. Discover the power of knowledge graphs and AI in digital marketing strategies."

These titles and descriptions are crafted to include the most relevant keywords and entities, ensuring they are optimized for search engines while being concise and informative.



SEO Titles & Meta descriptions



Find content on my website from the "What is structured data?" page (https://wordlift.io/blog/en/entity/structureddata/). Analyze the text to identify up to 5 related articles. For each article, determine a relevant keyword, generate keyword suggestions for each keyword, and create an anchor text of no more than 30 characters. Finally, compile the HTML for all 5 links with their respective anchor texts.





Agent WordLift 22:44

Here are the related articles with their respective keywords, keyword suggestions, and anchor texts. The HTML for the links is also provided.

Related Articles and Keywords

- 1. Article: What is structured data?
 - · Keyword: JSON-LD
 - Keyword Suggestions:
 - · apache jena json ld
 - json ld sitenavigationelement

 - json ld review generator
 - json ld c'est quoi
 - · activity stream json Id
 - · Anchor Text: Learn about JSON-LD
- 2. Article: Structured Data for Personal Branding
 - · Keyword: Knowledge Graph
 - Keyword Suggestions:
 - · knowledge base and knowledge graph
 - · knowledge graph sentiment analysis
 - enterprise knowledge graph architecture
 - sequence-to-sequence knowledge graph completion and question answering
 - · text-enhanced representation learning for knowledge graph

 - Anchor Text: Explore Knowledge Graph
- 3. Article: Structured Data on the Homepage
 - · Keyword: Schema.org
 - Keyword Suggestions:
 - schema.org plugin wordpress
 - schema.org offer



☆ 廷 Type your message here...

Internal Links

Identify Content

Process batch of pages in one prompt

Validate and implement



Content Planning

Research

Content Optimization

Content Distribution



Objective: To conduct a comprehensive analysis of top-ranking competitor pages to identify content gaps and create a detailed outline for optimizing this page: https://www.redibagusa.com/reusable-sustainable-bags/ Instructions:

- -Identify the primary and secondary keywords relevant to the topic.
- -Analyze this page from a competitor for content structure, depth, and comprehensiveness:

https://www.envireusablebags.com/blog/how-are-tote-bags-good-for-the-environment

- -Note the word count, headings (H1, H2, H3, etc.), multimedia usage (images, videos, infographics), and any unique elements (interactive content, data charts, etc.).
- -Compare the content on competitor pages with the existing content.
- -Identify missing entities and topics that competitors cover but the existing content does not.
- -Analyze internal and external linking strategies.



- · Reusable grocery bags sustainable
- · Sustainable reusable shopping bags
- · Reusable bags sustainable
- · Sustainable reusable produce bags
- · Are reusable plastic bags sustainable
- Competitor Page Analysis: "How Are Tote Bags Good for the Environment"
 (https://www.envireusablebags.com/blog/how-are-tote-bags-good-for-the-environment)

Content Structure:

- Introduction:
 - · Brief overview of the environmental benefits of tote bags.
- Main Sections:
 - Environmental Impact:
 - Discusses the reduction of plastic waste and its benefits to wildlife.
 - Materials Used:
 - Details on materials like cotton and linen.
 - Carbon Footprint:
 - Information on how tote bags help reduce carbon footprint.
 - · Versatility and DIY:
 - Highlights the versatility of tote bags and DIY options.
 - · Comparison with Plastic Bags:
 - Compares tote bags with plastic bags in terms of environmental impact.

Depth and Comprehensiveness:

 The page covers a wide range of topics related to the environmental benefits of tote bags, including materials, carbon footprint, and comparisons with plastic bags.

Word Count:

Content Optimization

Content Analysis

Keyword analysis

Competitor analysis

Content optimization

Knowledge Graph optimization

Internal link strategy





Can you generate a content distribution strategy for this blog post: https://wordlift.io/blog/en/dspy-seo-programmingframework/

The target Audience is composed of SEOs and digital marketers interested in using AI for SEO and, less importantly, Python programmers.

The goal of the campaign is to generate leads from SEOs and digital marketers interested in learning more about DSPy and AI models.

Analyze competitor content strategies for SEO tools and frameworks.

Highlight how DSPy is different and how it can benefit SEOs in a unique way.

Generate:

- · Social media platforms: Twitter, LinkedIn
- . Content repurposing ideas: Write a series of knowledge nuggets on different applications of DSPy for SEO
- Social media captions
- · Email newsletter copy



Agent WordLift 15:44

Content Distribution Strategy for DSPy SEO Programming Framework

Target Audience

- · SEOs and digital marketers interested in using AI for SEO
- · Python programmers (secondary audience)

Campaign Goal

. Generate leads from SEOs and digital marketers interested in learning more about DSPy and AI models.

Competitor Content Strategies for SEO Tools and Frameworks

- Knowledge Graphs for SEO: Competitors emphasize the importance of knowledge graphs in SEO, mapping
 relationships between diverse information pieces to enhance search engine performance.
- 2. Generative AI for SEO: Use of AI to automate and improve SEO tasks, such as content creation and optimization.
- 3. SEO Automation: Leveraging AI to automate SEO processes, making them more efficient and effective.
- 4. Entity Extraction Tools: Providing tools to extract entities from content to improve SEO efforts.
- Structured Data: Emphasizing the use of structured data to enhance search engine understanding and performance.

Highlighting DSPy's Unique Benefits

- Integration with AI Models: DSPy integrates seamlessly with AI models, providing advanced capabilities for SEO tasks.
- Python-Based Framework: Unlike many SEO tools, DSPy is built on Python, making it highly customizable and
 powerful for technical SEOs and developers.
- · Automation and Efficiency: DSPy automates complex SEO tasks, saving time and improving accuracy,
- Advanced Entity Extraction: DSPy's entity extraction capabilities are enhanced by AI, providing more accurate and comprehensive results.

Content Distribution Plan



Content Distribution

Content Distribution strategy

Social media captions

Content repurpose

Newsletter Marketing

Create Once Distribute Forever



Data Analysis

Keyword Clustering



You 15:59

I need help with clustering keywords for SEO purposes. Below is a list of keywords related to a bag manufacturer in the New York area. Please group these keywords into relevant clusters based on their semantic similarity, search intent, and potential target audience. Each cluster should be labeled with a descriptive name that encapsulates the main theme or intent of the keywords within it. Additionally, provide a brief explanation for each cluster on why the keywords were grouped together and how they can be utilized effectively in SEO strategies. new york packaging redibagusa redibag redibag usa redi bag usa new york packaging ii Ilc redi bag reusable bag manufacturer redi bags redi-bag ny packaging reusable bag shopping bag manufacturers how to recycle reusable bags readybag newyork packaging tortilla bags reusable bag companies redibag usa Ilc new york packaging company how much do reusable bags cost recycle reusable bags cooler bag manufacturer how to dispose of reusable bags reusable bags reusable grocery bags eco friendly bags company names fitting room number tags



Keyword Clustering



Based on the keyword suggestions and their semantic similarity, search intent, and potential target audience, here are the clusters for the keywords related to a bag manufacturer in the New York area:

Cluster 1: Brand and Company Specific Keywords

Keywords:

- redibagusa
- redibag
- · redibag usa
- · redi bag usa
- redi bag
- redi bags
- redi-bag
- readybag
- redibag usa Ilc
- redibag hybrid pe gloves
- · redi bag hybrid pe gloves

Explanation:

These keywords are specific to the brand "Redibag" and its variations. They are crucial for brand recognition and targeting customers who are specifically searching for this brand. Utilizing these keywords in SEO strategies can help in capturing brand-loyal customers and improving brand visibility.

Cluster 2: New York Packaging Companies

Keywords:

- · new york packaging
- · new york packaging ii llc
- · ny packaging
- · nowwork packaging





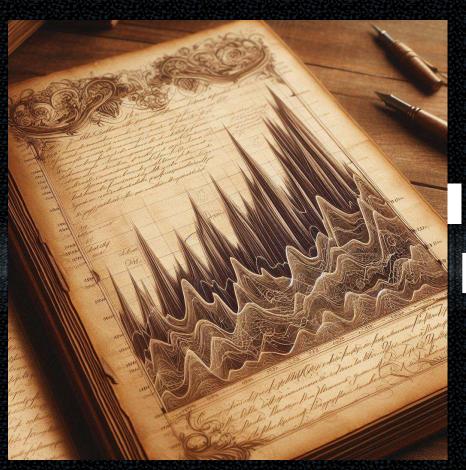


Keyword Clustering

Identify

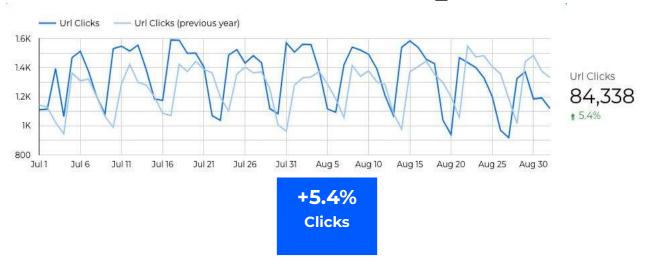
Analyse

Get working!



WHAT IS THE IMPACT ON THE BOTTOMLINE?

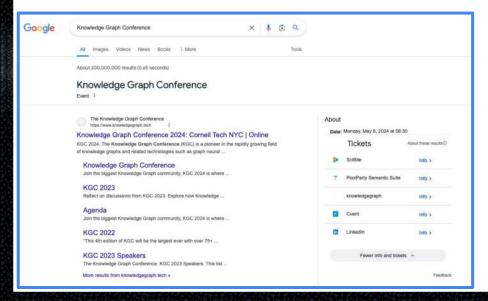
Impact of Al Gen Product Descriptions

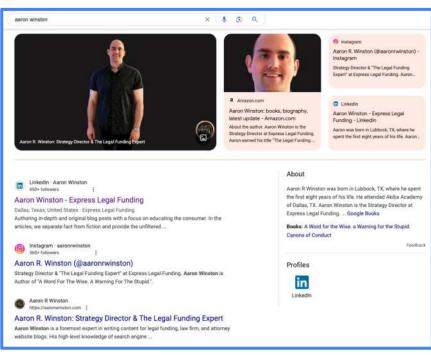


Year-over-Year organic clicks

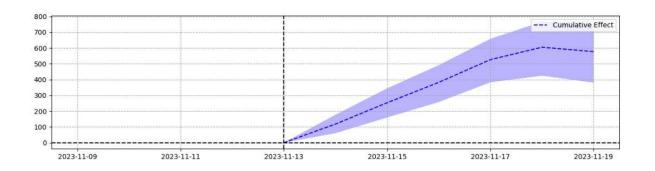
Anything above an increase of 5% is a success

When content is high-quality and traceable, it has more chances of being featured in rich snippets, enhancing the visibility of the site and increasing the opportunities to be cited as a trusted source of information.



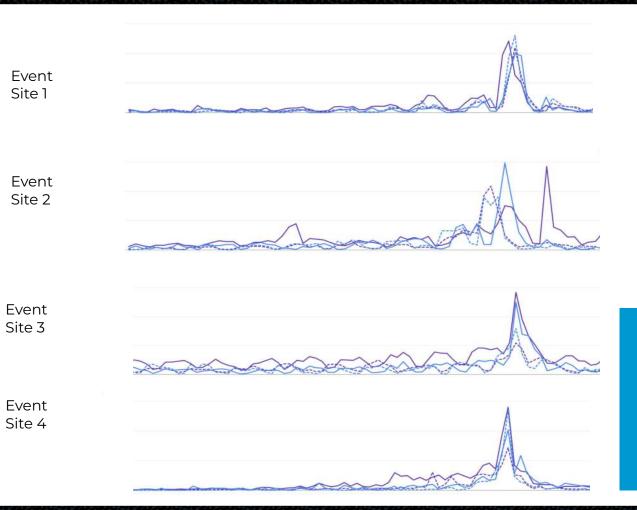


Impact of AI Gen Internal Links





Before vs After the implementation



+9.6%Avg Clicks

+60.2%
Avg
Impressions

+3.1
Avg
Ranking

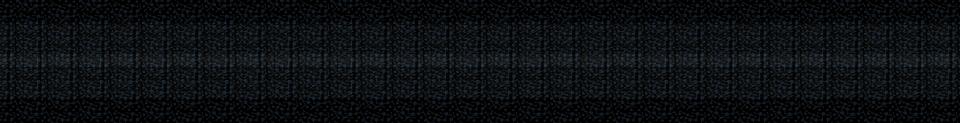
+49.5%

Revenues from Organic Search



WHAT DO WE DO WITH THE TIME SAVED BY AI

THE ROLE OF THE HUMAN IS MORE IMPORTANT THAN EVER



THE ROLE OF THE HUMAN IS MORE IMPORTANT THAN EVER

SHIFTING THE APPROACH

THE ROLE OF THE HUMAN IS MORE IMPORTANT THAN EVER

SHIFTING THE APPROACH

PLAN

DEVELOP RELATIONSHIPS

EXPERIMENT

UPSKILL & ADVANCE IN CAREER

Let's keep the conversation going





geatricebi



/beatrice-gamba/