



The Changing Amazon Algorithm - From Keywords to Intent

Amazon's Algorithm Shift



Keyword



Intent



Previous System: A9/A10

- Relied on keyword relevance
- Factored in sales performance
- A10 added engagement metrics

 Keywords

 Sales Data

New System: COSMO Algorithm

- AI-powered, context-aware
- Understands customer intent
- Matches based on behavior

 AI Engine

 Semantic
Context

What is COSMO

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Yu, et al.

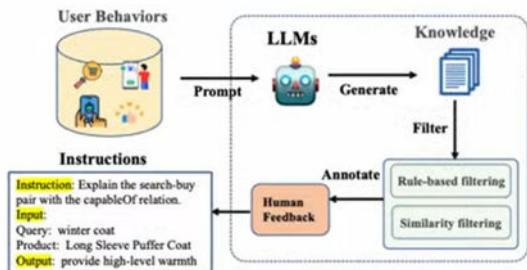


Figure 2: Overall framework of generating high-quality instruction data from massive user behaviors and LLMs.

domain d using the *capableOf* relation". Each task includes l_t input-output pair instances. For the commonsense generation task, the input can be a user behavior pair (p_1, p_2) or (q, p) , and the output is the typical knowledge tail t . Note the quality of knowledge (h, r, t) can be measured by *plausibility* and *typicality* scores labeled by human annotators [95, 59]. For the sake of plausibility and helpfulness

Table 2: Mined e-commerce commonsense relations for the COSMO KG.

Relation Type	Tail Type	Example
USED_FOR_FUNC	Function / Usage	dry face
USED_FOR_EVE	Event / Activity	walk the dog
USED_FOR_AUD	Audience	daycare worker
CAPABLE_OF	Function / Usage	hold snacks
USED_TO	Function / Usage	build a fence
USED_AS	Concept / Product Type	smart watch
IS_A	Concept / Product Type	normal suit
USED_ON	Time / Season / Event	late winter
USED_IN_LOC	Location / Facility	bedroom
USED_IN_BODY	Body Part	sensitive skin
USED_WITH	Complementary	surface cover
USED_BY	Audience	cat owner
XINTERSTED_IN	Interest	herbal medicine
XIS_A	Audience	pregnant women
XWANT	Activity	play tennis

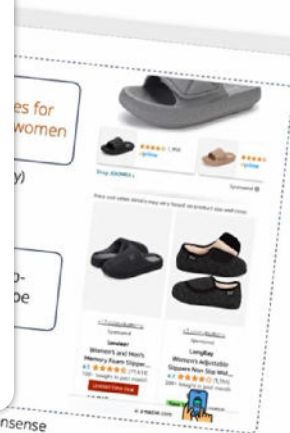


Figure 1: An example of mining implicit commonsense knowledge from e-commerce user behavior.

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our proposed system achieves significant improvement. Furthermore, these experiments highlight the immense potential of commonsense knowledge extracted from instruction-finetuned large language models.

ABSTRACT

Integrations of large-scale knowledge graphs in the e-commerce domain can enhance shopping experience for their customers. Knowledge graphs (KGs) integrate a

How COSMO Understands Intent

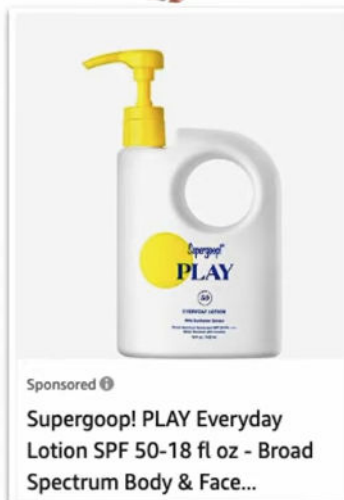
- Knowledge graphs
- Behavioral analysis
- Multi-turn refinement

Knowledge Graphs: COSMO constructs extensive knowledge graphs that link products based on **real-world contexts, such as usage scenarios, target audiences, and complementary items.**

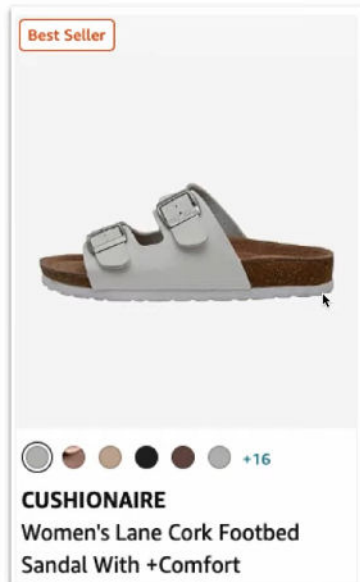
Analysis: By examining customer behaviors like search patterns, clicks, and purchase histories, COSMO identifies patterns that help predict what customers are seeking, even if their queries are vague or unconventional.

Multi-Turn Navigation: COSMO supports interactive search refinement. This dynamic approach facilitates a more intuitive and efficient shopping experience.

Search Term: “sunscreen”



Search Term: “shoes for pregnant women”



Example of Intent Recognition

Query: “furniture for small apartments”

Result: space-saving furniture



Smart
Suggestions



Home
Essentials



COSMO creates personalized product recommendations based on contextual understanding

- **Dynamic Product Suggestions:** Generating real-time product suggestions based on user browsing and purchasing patterns
- **Product Association:** Identifying and suggesting products that are frequently bought together using commonsense knowledge graphs
- **Product Comparison:** Assisting customers in comparing products by highlighting key differences and similarities based on common sense associations
- **Product Categorization:** Automatically categorizing products in a way that makes sense to customers, improving discoverability

What does it mean?

- Not fully keywordless — yet
- Keywords are just one of many signals
- The edge: Feed AI better data, don't fight automation

Adapt or fall behind

Implications for Sellers

- Optimize for context
- Use rich descriptions
- Avoid keyword stuffing

Content Optimization:

- focus on creating product listings that are rich in context and address potential customer intents
- use detailed product descriptions, usage scenarios, and clearly defined target audiences.

Keyword Strategy:

- keywords remain important, over-reliance on keyword stuffing is no longer effective
- integrating relevant keywords naturally within informative content that aligns with customer intent is crucial

Enhanced Product Attributes:

- Include attributes like "used for," "target audience," and "included components" to improve visibility in search results by aligning with COSMO's understanding of product contexts

Enhanced Product Attributes

Define use case

Shop kitchen appliances



Explore now

Define audience



Improve discovery


Videos for this product



 Attributes

 Use Cases

COSMO analysis and interprets images



Shaker

Check whether we support your label

▼ Results

Bottle	99.9 %
Cosmetics	99.9 %
Sunscreen	99.9 %
Shaker	92.4 %

► Request

COSMO analysis and interprets images



Check whether we support your label

 Enter a label name

▼ Results

Bottle	99.9 %
Cosmetics	99.9 %
Sunscreen	99.9 %
First Aid	91.9 %

► Request

Think Audiences not Keywords

- Keyword ranking as we know it, will change
- Audience targeting gains more importance
- Understand avatar and their behaviour
- An image is worth a thousand words
- A video is worth a million (360 videos)
- Writing to the human not algorithm

Adapt or Fall Behind

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Some Observations

With AI advancing, **search volume is expected to drop by 25% by 2026.**

Users will not start their search on Google and land on Amazon anymore.

AI-driven personalization will replace search.

Conversions will be driven by personalized content.

Personalised search results will be the future of e-commerce.

The impact of Apple iOS 18 on email deliverability. With 47% of iPhone users on the Mail app, this is going to be huge. AI will soon categorize emails differently, and this won't be like Gmail tabs. In order not to get filtered out, be sure your newsletters come from a person's name (not info@ or support@).

For Amazon sellers who are sending newsletters, switching to a personal name could lead to a 48% higher open rate compared to branded newsletters.



Thank you!

**Sell
Global** 