

Amazon Big Data Thinking-from Big Data Operations to Operational Data

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Abstract: Amazon operations need to rely on Amazon AWS data and A9 algorithms. Whether it's Amazon's daily operations or Amazon's daily work data, it's inseparable from all kinds of data. From selecting talents, selecting products, to product uploading, product optimization, product operations, and even promotion, spike activities, big data thinking is inseparable. Whether the company's revenue and expenditure are balanced, whether the logistics supply chain is complete, whether the number of uploaded products is sufficient, and whether the staffing is perfect, can use the data to get the best plan to maximize the company's benefits.

1. Introduction

1.1 Aws

Amazon Web Services (AWS) is the world's most comprehensive and widely used cloud platform, delivering more than 165 full-featured services from a global data center. AWS serves a broad range of applications including computing, storage, database, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), security and application development, deployment and management.

For example, Amazon EC2 provides more types and sizes of compute instances than any other provider, including the most powerful GPU instances for machine learning workloads.

1.2 The Key to Amazon's Data Operations

A9 algorithm. The A9 algorithm analyzes and ultimately implements Revenue Per Customer (RPC) based on these data, which means that the A9 algorithm will track Amazon's data on each behavior of buyers in Amazon and as a point to maximize buyers. It is the primary indicator of earnings. To put it simply, in order to improve the conversion of products and to facilitate the service of consumers, Amazon will accurately record and analyze the customer's product search, purchase, etc., to ensure that customers can find the "products they want to buy" as soon as possible.

2. Amazon's Big Data Operation

2.1 Listing

The title requires as many product keywords as possible within 200 characters, and the keywords must be the easiest to be easily queried by the A9 algorithm. This requires data statistics to find the most critical keywords and complete the title of the product;

Search Terms: You can only write one line, you must also highlight the core functions of the product, adjust the order according to the selling point. The most critical part of the A9 algorithm is that the entire product page is related to this link; Page description: Carefully design product images, modify the image according to specific requirements, attract customers' attention; Text page, the font can be bold, line break, try to attract the desire to buy;

The sub-category of the product: If you choose a category that is not related to your product when you put the product on the shelf, it is very likely that the keywords you set are blocked by Amazon in this category. Search for product keywords under this category, and your product may never appear at all times; Technical parameters: Write a clear description of the product technology and details, in line with the actual situation of the product.

These are the information that customers can directly see, and are the most intuitive to reflect the products they operate.

2.2 Cpc

Amazon's promotion method, called "pay-per-click", is a form of on-site promotion that Amazon sellers need to master. It allows the listing to get more exposure and pageviews by placing advertisements on the target group. It helps the creation and formation of the explosions if the listing meets the buyer's needs, the description is clearly in place, and the images are attractive enough. Especially for products with less competition, high prices, and high profits, priority should be given to the placement of CPC. The keywords selected by the CPC advertisement are ranked according to the keywords in the listing, and are automatically selected according to the A9 data;

2.3 Promotion

Amazon Promotions have the following promotions: Free Shipping (self-delivered products only), money off, Buy One Get One, Giveaway.

On a daily basis, sellers can set up promotions to drain their stores, increasing exposure and orders. The premise of the promotion is that the price has been adjusted, and 20% off must be made before the promotion interface can be entered. The priority sales at the Amazon front desk are also controlled by the Amazon A9 algorithm.

2.4 Amazon Deal

Generally speaking, Amazon's sellers usually choose the Deal in the Lightning deal and the Best deal. The main site is Slickdeal and Hotukdeals.

Deals makes traffic more accurate and more Lightning Deal appears on one of Amazon's most visited pages, and its activities are also included in search results; Through the deal, you can attract a lot of free traffic in the Amazon station, and the traffic is very large. The deal can increase rankings and sales, drive sales of other related products, help you clean up slow-moving inventory and seasonal products;

It can be said that the A9 algorithm is the key to the entire Amazon operation, and all sellers must operate in accordance with the data provided by Amazon.

3. Data Operation

3.1 Keyword Adjustment

Select about 10 roots and search in the Amazon search box using "Root + a-z/1-9". The keywords under all categories and the keywords under the category of the product are all in line, the process will be more troublesome, but the words are the most accurate. Google keywords can also be selected in this way. The adjustment of the keyword is through the data provided by the Amazon background, and is analyzed again, and the search result is verified by the Amazon front search box. Sort and adjust based on the displayed data results;

3.2 Keyword Bid Analysis

The search term filters out better-performing words and makes phrase matches. The threshold for selecting a word is based on: Acos: 15-20% CTR: 2-3% CR>8%, the initial high budget has accumulated a large amount of data, providing a large amount of data for future development, but the latter budget will be less. When choosing a keyword, you must first distinguish the three concepts: broad, phrase, and exact. Broad is extensive and will be displayed whenever relevant searches are made. Exact is precise and will be displayed if there is a match between the words the buyer has found. The correlation of the phrase is between exact and broad. When the buyer searches for the word that includes your keyword, it will be displayed, which can be directly based on the Amazon front-end search result data.

At the same time, we should use the PivotTable to visually see the performance of a keyword. The advertisement period is recommended to be one month. The longer the period, the more

accurate the data, and the more data is referenced.

3.3 Advertising Expense Report

It can be displayed according to DAYS, MONTHS, YEARS, and the date is the most accurate. The table can be used to roughly analyze the difference between the number of people who clicked on the day, the weekend and the workday. You can refine the total spend and clicks of each day to find out the reasons for the sharp drop and increase. Increase the budget on a good day, because the budget will be biased towards a good Keyword and the opportunity to rob other words; Used to test individual SKUs under variants to help you choose the best, avoid competition, and monitor the development of SKUs that create explosions; You can tell which ad groups should turn Bid+ on or off; you can also find the real search keywords of consumers and get high-quality keywords through the PivotTable.

3.4 Operational Income and Expenditure Report

The products produced by CPC, the sales generated, and the profits generated can cover the cost of our CPC. $ACOS = PPC \text{ cost} / PPC \text{ sales} * 100\%$ (ACOS is a master in 16%, ACOS is a top player in 8%), ROI can not be too high, and not be too low, get the maximum return with the least investment. Normal ROI: The return is between 90% and 120%, and to reach this range, it needs to be adjusted according to the ratio of income and expenditure.

4. Amazon Big Data Thinking

4.1 Talent Big Data

Amazon's operations require people to complete, and finding the right talent is the key to solving all problems; The ratio of male to female Amazon operators is roughly 3:7, (here stated: there is no gender discrimination). The character of boys is not suitable for sitting in front of the computer, continuously observing data and calculating advertising costs, looking for more and more suitable keywords; Operators should also be proficient in various methods of Google data. In the Amazon operating staff source, the proportion of undergraduate and junior college students is equivalent, but the actual effect, the value created by undergraduates is not created by the junior college students.

4.2 Selection of Big Data

The five elements of Amazon's selection data are:

- a. product sales ranking (this is the most reliable data);
- b. estimated sales of products;
- c. product sales;
- d. product reviews;
- e. product opportunity scores (Reference can not sell well);

When necessary, you can refer to the customs data of China and the United States to see which products are the most exported and which are imported from the United States;

At the same time, you can also refer to the big data in the Amazon background, according to the specific product sales, find out the new products and the series of new products;

In order to avoid seasonal problems in the product, sellers will basically use Google AWARDS and Google Trends to conduct seasonal analysis of products, product trends, product colors, and keyword bids;

4.3 Profit Big Data

The product pricing is clear. Now let's take a look at the cost accounting of the product. The product cost includes: procurement cost, domestic logistics, platform commission, FBA sellers need to add head-end logistics expenses, FBA distribution costs.

If your product purchase price is 3 US dollars, the product weight is 500 grams, the price is 20 US dollars, domestic logistics is calculated according to 1.3 US dollars / kg, then the domestic logistics cost of a single product is 500 grams multiplied by 1.3 is 0.65 (different logistics

companies specific Prices will vary).The cost of head-to-head logistics is US air transportation, for example, 32 yuan / kg, then 500 grams multiplied by 32 is 16 yuan (the specific price will change). The platform commission is calculated at 15%, then the \$20 price is \$3.FBA's shipping costs are generally \$2-3 (the larger the volume, the more expensive). Then the product is about 10 dollars;The gross profit of this product is 20 US dollars to 10 US dollars, and its gross profit margin is about 50%.

4.4 Supply Chain Big Data

Although Amazon owes its success to improving the user's shopping experience, the fact is that a strong supply chain and the ability to meet demand keeps this sentence free. Amazon has real-time contact with producers to provide customers with day/next day delivery options based on data tracking inventory needs.

Amazon uses big data systems to weigh the proximity between suppliers and the proximity between customers to select the most appropriate data warehouse to minimize distribution costs. Big data systems help Amazon predict the number of data warehouses required and the capacity each warehouse should have. At the same time, Amazon also uses distribution theory to select the best time schedule, route and product classification to minimize distribution costs.

5. Conclusion

Today, Amazon's three main axes are: E-Commerce Market, Prime Member Services, and Amazon Web Services. AWS's business growth and Prime member's ecosystem management have exceeded double-digit growth for 20 consecutive years. According to statistics, Amazon's total revenue in 2016 has reached 100 billion US dollars. In the first quarter of 2018, the profit has doubled, and the profit reached 1.9 billion US dollars, up 92% from the same period of last year, of which up to 1.4 billion US dollars of revenue comes from AWS.

Whether you start with an AWS cloud computing host or refer to the Amazon data provided by the A9 algorithm, you need to have a big data thinking.

We need comprehensive comparison data, in-depth analysis of products, cost-effective product cost and pricing, and analysis based on the advertising data provided in the background.

But in the era of big data, collecting information is no longer difficult. From the data, what should be seen is "relevance." Using data to speak, we can use data analysis to understand the truth in the store operation process, understand the intrinsic link between different data in the store, and help us make the right decision.

In the era of big data, every business segment has a lot of data, and every link can be improved to turn costs into profits.

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