

User Review Prioritization Analysis using Metadata

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Abstract

With the advancement of Internet technology, online sales and purchases of products have become active. Along with this, the importance of user reviews is also being highlighted. Although user reviews are actively utilized for product sales and purchases, it is difficult to quickly and easily obtain useful information due to the abundance of user reviews. Therefore, prioritizing user reviews is a necessary service for customers that requires careful consideration. Metadata, which contains important information, can be effectively used to prioritize user reviews. However, it is crucial to select and use metadata appropriately according to the purpose. Lean Startup proposes a strategy of repeatedly correcting the problems of ideas or making early transitions to continue trying different approaches. In this paper, we propose a three-step method applying the Lean Startup process to analyze ways to prioritize user reviews using metadata: Build Priority, Measure Priority, Learn Priority.

Keywords: *User Review, Metadata, Prioritization, Lean Startup*

1. Introduction

As internet technology has advanced, online sales and purchases have become more common and have become part of everyday life. Along with this, user reviews, which directly affect product sales and purchases, are also attracting attention and are being actively researched [1-3]. In the research of user reviews, the priority of user reviews is a topic that has received a lot of attention recently, for the convenience of customers [4]. User reviews are actively used for product sales and purchases, but with a large number of user reviews posted every day, it is difficult to read all of them to get useful information. Therefore, prioritizing user reviews is an essential service for customers and a factor that greatly affects product sales and purchases.

Many online services offer various ways to prioritize user reviews. For example, they display user reviews through various criteria, such as chronological order, recommendation order, and so on, for the convenience of the customer. Metadata is data that contains important information and can be used to prioritize user reviews. However, because there are many different types and forms of metadata, it's important to select the right ones for each purpose. Lean Startup suggests a strategy of iteratively fixing problems in ideas or switching ideas early so that other attempts can be continued. We will use the Lean Startup process to select metadata that is

suitable for the purpose.

2. Lean Startup

Lean Startup is a new strategy that incorporates Lean Thinking, which minimizes waste by eliminating unnecessary factors in resources. Rather than wasting money, Lean Startup proposes a strategy to create a Minimum Viable Product (MVP) based on a hypothesis as soon as possible, release it to potential customers, get feedback, iteratively fix problems, or pivot the business direction at an early stage to minimize the damage of failure and continue to try other attempts [5]. Figure 1 shows the Build-Measure-Learn feedback loop, which is the core of the Lean Startup strategy.

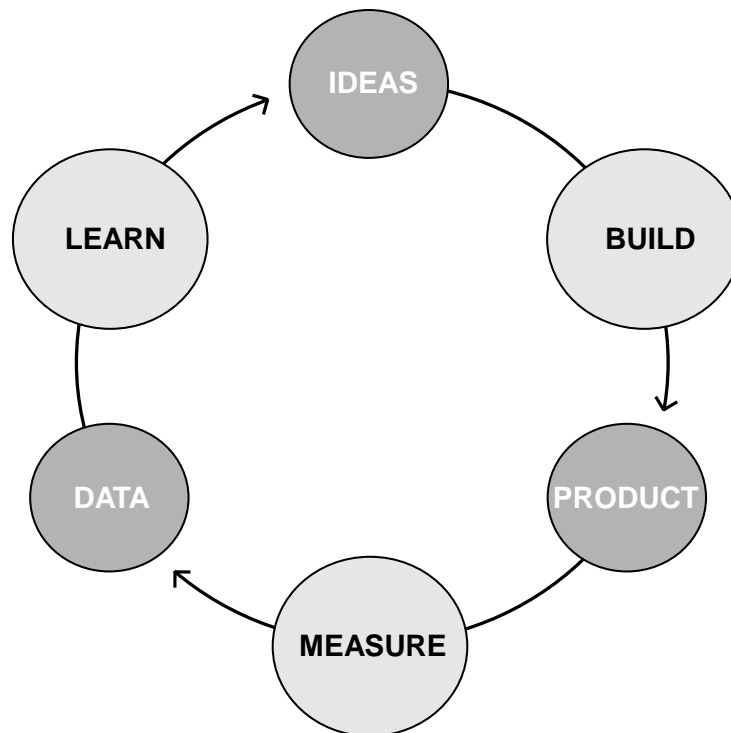


Figure 1. Build-Measure-Learn feedback loop [5]

3. Proposed Method

In this paper, we apply the Lean Startup process to analyze prioritization methods using metadata from user reviews and propose a three-step method: Build Priority, Measure Priority, Learn Priority. Figure 2 shows the relationship between the three steps proposed in this paper.

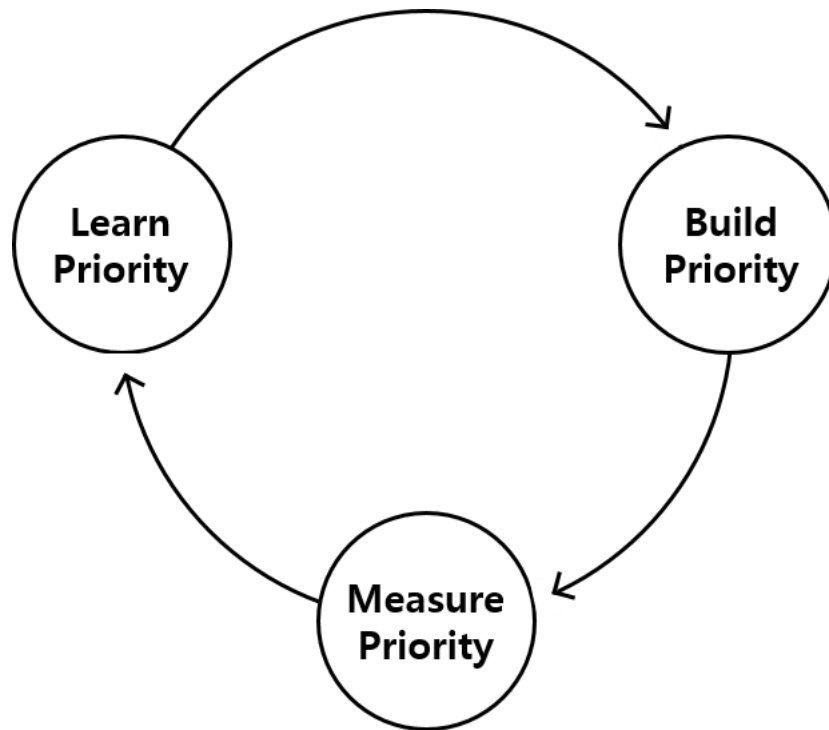


Figure 2. Relationship between the three steps

Build Priority is the step where the purpose and criteria for the priority and the metadata to be used are defined and created. Measure Priority is the step where the previously created priority is measured to ensure that it meets its purpose and criteria and that the metadata used is appropriate. Learn Priority is the step in understanding the current state of the priority based on the measured information. The above three steps can be conducted in an iterative process of refinement to correct problems, or an early change of direction to try a new approach is also possible. Each step is described in more detail below.

3.1 Build Priority

There are many purposes and criteria for prioritizing user reviews. We will select a purpose and criteria that consider the information customers want, to aid in product sales and purchases. Once the purpose and criteria are established, relevant metadata is identified. The selected metadata will determine the outcome of the prioritization, so careful consideration is required. After selecting the relevant metadata, a subset of user reviews will be prioritized using the chosen metadata.

3.2 Measure Priority

For some prioritized user reviews, we measure whether the selected metadata aligns with the purpose and criteria. Stakeholders participate in reviewing and discussing each prioritized user review in terms of purpose, criteria, and metadata. Various methods, such as surveys, interviews, and user behavior data analysis, are conducted with the target customers to provide feedback on the prioritized user reviews.

3.3 Learn Priority

The current state, based on previously collected data, is assessed to determine the effectiveness of the selected purpose, criteria, and metadata for prioritization. If there are issues, iterate on the process to make improvements. If the direction is incorrect, consider pivoting early to try different approaches. If the selected purpose, criteria, and metadata are suitable for delivering meaningful results to customers, utilize them to provide prioritized user review services.

4. Conclusion

We propose a three-step method (Build Priority, Measure Priority, Learn Priority) applying the Lean Startup process to analyze ways to prioritize user reviews using metadata. It involves defining the purpose, criteria, and metadata for prioritization, building upon them, and measuring their effectiveness. Then, based on the measured data, the current state of prioritization is assessed. Through this method, customers can easily and quickly find the information they want from user reviews, and it is expected to provide a better prioritization service than the current one. It is also anticipated to directly impact product sales and purchases, offering significant assistance.

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