EC601

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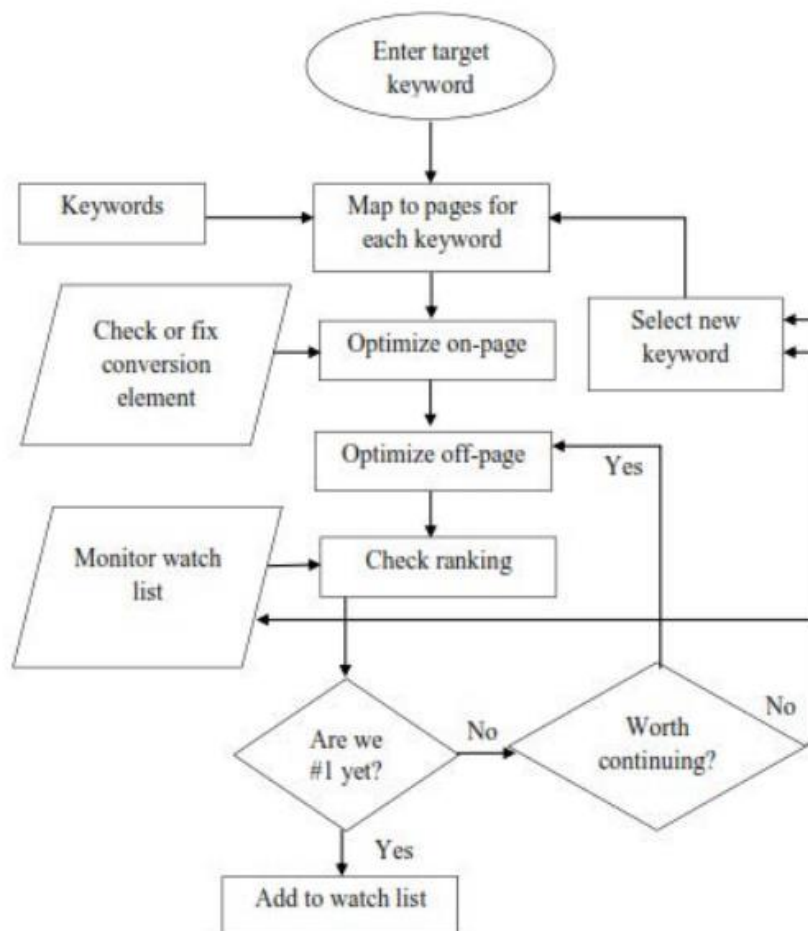
Project 1

Search Engine Technique Review

Search engine is a technique based on website to search for the certain content. The concept includes keyword searching, the normal content searching and image searching. Keyword searching is mainly defined as using dataset to match the keyword. The content searching is the most used in our daily life. Compared to keyword searching, it required a preprocessing method to adjust the input content to the specific keywords which will be actually used in searching. The image searching is based on machine learning methods to transfer a image type input to a keywords then based on the requirement to return the websites, related images or other detailed information about this image.

The search engine totally changed our life. In previous days, our knowledge is limited to books and teachers. If we have a question, we may not get the answer right away because just no one around you know the answers. The search engine provides our chances to learn more about the world. The information shares worldwide by internet while search engine is the key for us to find the shared information.

In our daily life, we can use search engine provided by shopping website to search for the items we want to buy. The techniques behind it can be concluded as find the related things and show them to user in a certain sequence. So, what I am interested in is the methods algorithm engineers used to rank the results and show them to users.

The societal significance of the research is about the marketing. The searching results are influenced by how the keywords entered by users related to the items in dataset and how the owner of the website want users to see at first. To improve the former one can bring user better experience when using this website to do shopping and therefore users will continue to use it and recommend it to others. To improve the latter one, the owner of this website can charge sellers and give their products better rankings.

AH Roslina provided a solution to the Search Engine Optimization. He implements white hat search engine technique in e-business website and achieve good results. White hat technique is defined as search engine returns good quality content which will in long run benefit users and website. The main process flow is shown as following,

The result is that the developed website keep up-to-date with best keyword suggestion to reach higher rank results in Google search engine. In week 1 the rank is 6, 7 weeks later, the rank improves by one, in week 16, the rank reached 4, and in week 20 the rank reached 3. Finally, after week 24, the rank keeps in 1. So, this method achieves the expectation.

A related open resource is called meilisearch on Github. It helps you to shape a delightful search experience in a snap. The features include 1.find search results in less than 50 milliseconds 2. get relevant matches even when queries contain typos and misspellings 3. enhance your user's search experience with custom filters and build a

faceted search interface in a few lines of code 4. sort results based on price, date, or pretty much anything else your users need 5. control which users can access what data with API keys that allow fine-grained permissions handling.

Works Cited

1. AH Roslina and MF Nur Shahirah. 2019. Implementing white hat search engine technique in e-business website. In Proceedings of the 10th International Conference on E-Education, E-Business, E-Management and E-Learning (IC4E '19). Association for Computing Machinery, New York, NY, USA, 311–314.

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2. Aziz Barbar and Anis Ismail. 2019. Search Engine Optimization (SEO) for Websites. In Proceedings of the 2019 5th International Conference on Computer and Technology Applications (ICCTA 2019). Association for Computing Machinery, New York, NY, USA, 51–55. https://doi-org.ezproxy.bu.edu/10.1145/3323933.3324072

3. GitHub - meilisearch/meilisearch: A lightning-fast search engine that fits effortlessly into your apps, websites, and workflow.