* **Description**

We are contributing to building a large-scale learning workflow. In such a complex system including massive worthy information, a powerful search engine, which many present social network websites are weak in, is quite important for users.

Therefore, we want to develop an effective and efficient search engine for our learning workflow. With this tool, users can search information valuable to them within our websites, get more relevant information from other specific websites, set constraints to the results wanted to search pertinently, and so on. To enhance user experience, we also have some functions to make the query typing, result sorting, page loading, etc. more intelligent.

Our realized functions include:

(1) Federated search: to search in several platforms including wiki, SNS, etc.

(2) Search filter: to limit the searching scope to the constraints required by the users.

(3) Autocomplete: to provide users with suggested queries or results as they type their query in the search box.

(4) Automatic loading: to load next pages automatically when the end of a page is reached.

Our functions under development include:

(1) Intelligent sorting: to sort searching results according to both relevance and users interest points.

(2) Snippet generation: to generate appropriate summary of the pages searched.

(3) “SMART” function: That is semantic analysis, or proper nouns recognition. This function is to detect the actual content of the key word and provide more detailed information from relevant websites to the users.

* **Input**

For general search, the input is the key words typed in the searching box. For search filter, the input requires both the key words and the constraints defined by the users.

What’s more, to display searching results and realize the filter funtion, we need detailed data stored in each platform, such as the title, content, author, publishing time of a blog, the size of a picture, the length of a video, etc. The history records of the users’ personal information, activities, operations, etc. are also needed to analyze their interest points which are used in result sorting. The searching histories are necessary for autocomplete function.

* **Output**

The output is searching results from within the website and other relevant websites (when semantic analysis functions), including the page title, a snippet of the page, and the URL of the page. The searching results satisfy the constraints of the users and are ordered according to both relevance and users interests and preferences analyzed from their records.