COVID-19 INTELLIGENT QUERY SYSTEM


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PROJECT OVERVIEW

COVID-19 Intelligent Query System (COVID-IQS) was a web project aiming to provide a search engine specialized in medical articles to provide more reliable sources of information for everybody during and after COVID pandemic. After many updates, our databases now contain nearly **30, 000** medical articles gathered from multiple prestigious sources including PubMed. Our users could search for articles of their interest, store articles in their own projects, and share such projects to other COVID-IQS users.

TECHNOLOGY

- Bootstrap
- Flask
- MySQL
- ElasticSearch



***Figure 1**: Technologies used in this project*

RESULT

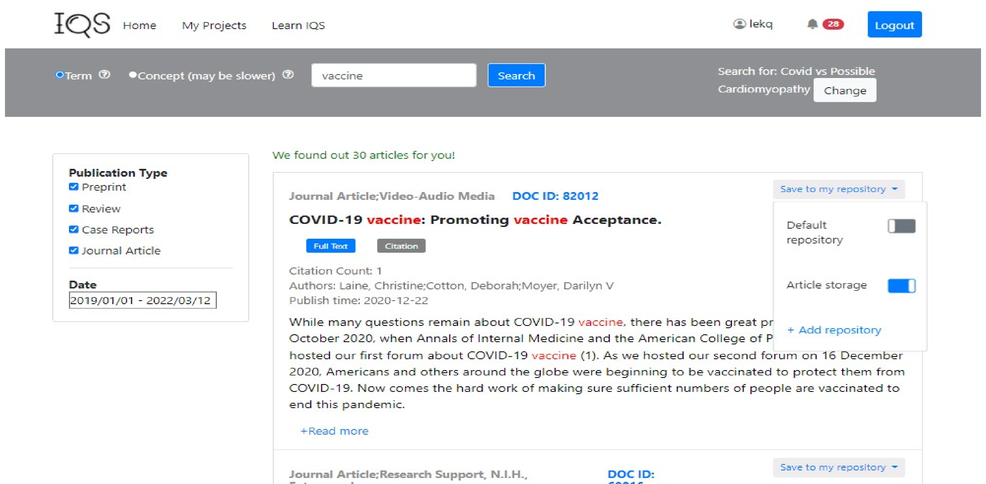

***Figure 3**: Search page of COVID-IQS*

CHALLENGE

- The lack of designing skill hindered the speed of user interface development
- The time-consuming article retrieval affected the integration of backend design into frontend design
- The requirement of user security added more complexities into the project

ACHIEVEMENT

The user can perform the following operations on the current version COVID-IQS:

- Search articles by keyword
- Create/edit/delete/share a project
- Create/edit/delete a repository inside a project
- Save/remove articles into/from a shared project

SYSTEM DIAGRAM

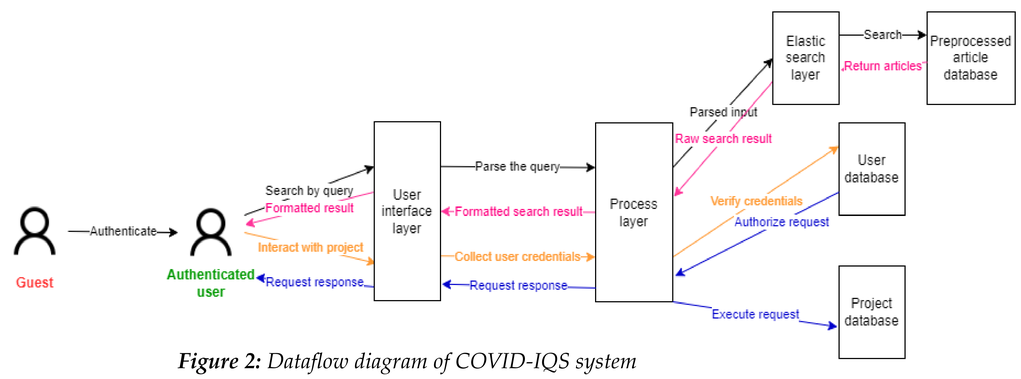

***Figure 2:** Dataflow diagram of COVID-IQS system*

FUTURE PLAN

- The limit on number of returned articles for each query (currently, 30) could be increased to provide users more information
- An implementation of lazy evaluation could be added to replace the complete but time-consuming article preprocessing
- A cooperation with UC Library could be discussed to integrate and utilize more its tremendous amount of articles