Software Administrator

Mouzheng Xu

Management Information Technology and System Office

Supported by LM

1. Background

nd research activities, users frequently need to check information about software provided by the University, such as software versions, supported classrooms, or applicable usage environments. At present, this information is mainly accessed through the official University software support platform:
https://esupport.xjtlu.edu.cn/software

However, the existing query approach presents several issues:

1) **High information volume with noticeable search costs**

   The platform pages contain extensive content, including software descriptions, download links, user guides, and compatibility notes. In practice, users are often interested in only part of this information and must repeatedly search through large volumes of data to locate what they need.

2) **Low query efficiency**

   Users are required to manually browse, filter, and compare multiple entries, which is time-consuming and increases the risk of missing critical information.

3) **Lack of intelligent recommendations**

   The system cannot proactively provide precise suggestions or filtering based on user needs, relying instead on manual, item-by-item searching, resulting in a suboptimal user experience.

2. Solutions

To address the difficulties users face when querying information on the software support platform, this project introduces an **AI agent** to enable real-time web content scraping and intelligent information retrieval. The system automatically parses data from the https://esupport.xjtlu.edu.cn/software page and extracts key information such as software versions and supported operating systems. At the same time, laboratory and computer room information is imported into a knowledge base.

By combining this knowledge with contextual information about the user’ s laboratory or workplace location, the AI agent can filter and match search results to provide the **most relevant and accurate**

software usage information. Users only need to submit natural language queries—such as "Which computer rooms support MATLAB?" or "Which graphics software is available in Lab A?"—and the AI can quickly return precise answers without requiring users to manually navigate lengthy web pages.

3. Outcomes and Benefits

The project has largely achieved its intended functionality. The AI agent can accurately parse content from the software support platform and, in combination with laboratory or computer room information, deliver precise software query results. Users can obtain the information they need quickly without manually browsing extensive pages, significantly improving both query efficiency and overall user experience.

4. Next Steps

Going forward, the system will continue to ensure real-time updates of software information to remain fully aligned with the official platform. Additional features will be introduced based on user needs, such as more advanced filtering, historical version comparisons, and integrated download and usage guidance. These enhancements aim to further improve query efficiency and user experience, ensuring the system's long-term usability and practical value.