

AI One-Stop Assistant (XJTLU Unified Q&A Assistant)

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1. Background

As many universities have successively launched their own AI Agents and achieved high daily active usage, intelligent Q&A tools have begun to demonstrate tangible value in campus scenarios.

Following the deployment of Volcengine HiAgent at XJTLU, various functional departments actively participated in agent construction by uploading departmental guides, FAQs, and related materials, gradually building their own dedicated Q&A Agents. To date, more than 30 Agents have been launched by administrative departments such as MITS, Learning Mall, CMO, Library, Museum, and PURO, among which around 10 Agents focus specifically on departmental knowledge and service-related Q&A.

However, due to the lack of unified planning and effective coordination across departments, this bottom-up development approach resulted in fragmented resources, duplicated investment, and difficulties in unified management and collaborative application.

Against this backdrop, the University identified the need to establish a university-level unified Agent to integrate and orchestrate the capabilities of departmental sub-agents, thereby improving resource utilization efficiency while ensuring service quality consistency and controllability.

2. Solutions

A public workspace was created within the HiAgent platform, where a university-level master Agent was deployed. Using the **multi-Agent mode**, the master Agent orchestrates capabilities by flexibly connecting departmental sub-agents through configurable “Agent nodes.” Each sub-agent is assigned dedicated prompts and applicable scenarios, enabling it to function as a callable capability module managed by the master Agent.

During runtime, the master Agent performs **intent recognition** based on its orchestration prompts, intelligently selects the most appropriate sub-agent to respond to user queries, and returns the response to the

user. This design enables a **unified entry point for cross-departmental knowledge** and efficient capability dispatching across the campus.

3. Outcomes and Benefits

At present, the university-level master Agent has successfully integrated five departmental sub-agents, including those for CMO campus management, MITS IT service Q&A, Library services, and Museum services. Post-deployment results indicate that the master Agent can accurately identify user intent and route queries to the appropriate sub-agent, achieving a high overall response accuracy.

Under this architecture, prompts, knowledge bases, and parameters of each sub-agent no longer require manual synchronization or repeated maintenance by administrators. This significantly reduces management overhead and minimizes information fragmentation. Looking ahead, onboarding a new departmental Agent only requires adding it as a node within the master Agent framework, enabling true **plug-and-play integration** and continuous expansion of intelligent service coverage.

4. Replicability and Promotion Value

Practice has demonstrated that the multi-Agent orchestration architecture can effectively integrate distributed departmental Agent

resources while ensuring knowledge accuracy and a consistent service experience under centralized governance. Whether scaled vertically within the education sector or replicated horizontally across other industries, this approach provides a practical and efficient solution for multi-department information integration and the construction of a unified intelligent service entry point.

5. Next Steps

Currently, the AI One-Stop Assistant primarily focuses on knowledge-based Q&A capabilities. Several departmental Agents have been connected, and initial testing has shown positive results. Further optimization of prompts and multi-Agent orchestration strategies is still required to continuously improve response accuracy and consistency.

In the future, the AI One-Stop Assistant will gradually evolve from a “knowledge Q&A tool” to a capability-driven service platform.

Planned enhancements include modules such as AI-powered service handling and AI-driven data querying, enabling the system not only to answer questions but also to assist with business processing and data retrieval.

Through continuous expansion of capabilities and scenarios, the XJTLU AI One-Stop Assistant is expected to develop into a more powerful, intelligent, and comprehensive campus-wide digital assistant.