

# E-Support AI Chatbot

Yan Liu

Management Information Technology and System Office

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## 1. Background

With the continued advancement of campus digital transformation, the demand for IT services among faculty and students has become high-frequency, diverse, and time-sensitive. Traditional IT service models rely heavily on manual consultation and suffer from several limitations: restricted service hours (9:00–17:00), delayed responses during peak periods (such as admissions and semester start), and low efficiency in handling repetitive inquiries (e.g., password resets, network connectivity, and software installation), which consume substantial human resources.

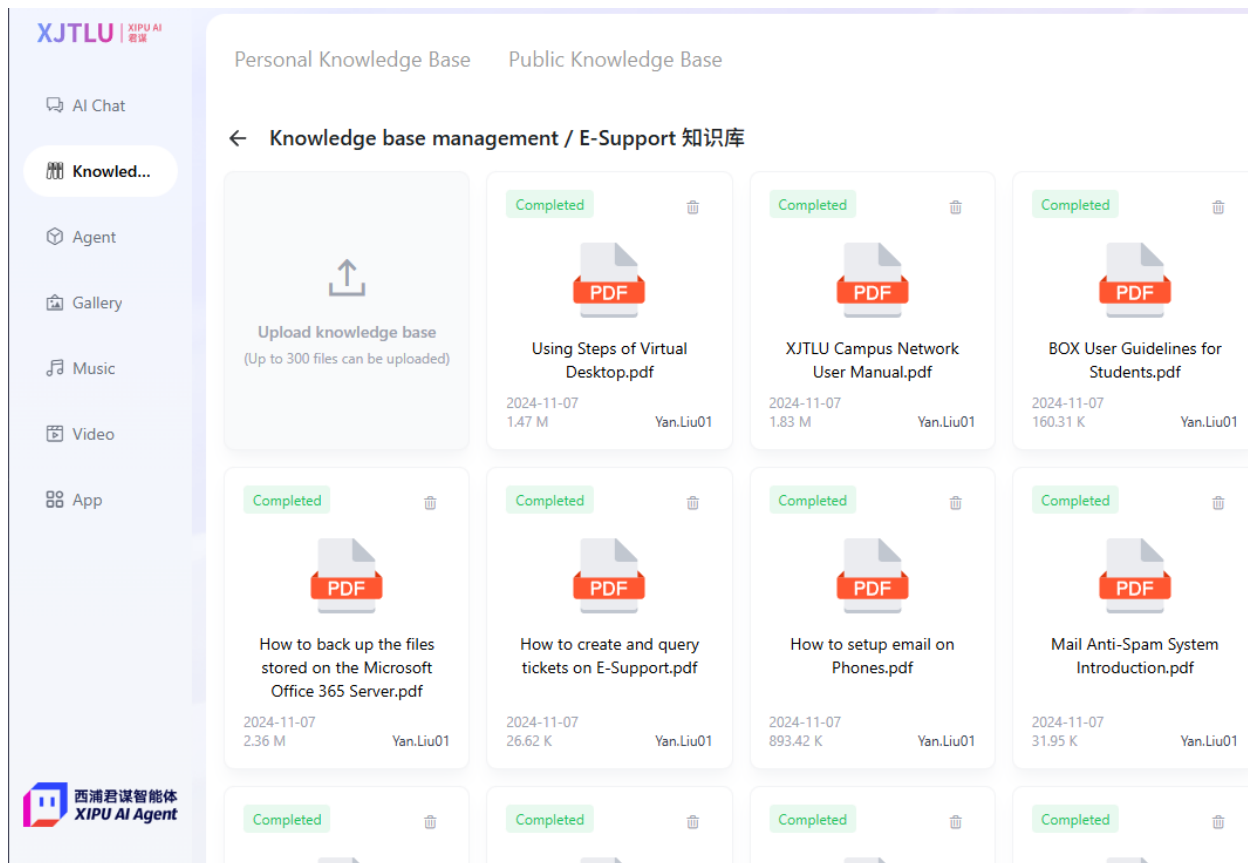
To overcome time and space constraints, improve IT support efficiency, and enhance user satisfaction, MITS initiated an intelligent service upgrade project aimed at building a 24/7, intelligent IT consultation service system.

## 2. Solutions

Leveraging the large language model (LLM) capabilities of the **XIPU AI platform**, MITS developed the **E-Support AI Chatbot**, following three core implementation paths:

- **Knowledge Base Construction and Optimization**

Various guides, manuals, FAQs, and policy documents were collected and consolidated to build the MITS service knowledge base. Using XIPU AI's document parsing tools, more than 140 documents were structured and transformed into vectorized data retrievable by the model. A regular update mechanism was also established, with new questions and solutions synchronized on a monthly basis.



**Figure 3-1 Knowledge Base of the Intelligent Q&A Robot for Campus IT Services**

- **AI Model Configuration and Integration**

With support from colleagues in Learning Mall, the Chatbot was built on the XIPU AI platform using an LLM-based **Retrieval-Augmented Generation (RAG)** approach. When users submit questions, the Chatbot first retrieves relevant information from the knowledge base through keyword matching and semantic understanding, then generates coherent natural-language responses to ensure accuracy and professionalism. Multi-turn

dialogue capabilities were also enabled to support follow-up questions and complex problem resolution.

- **Service Platform Deployment and Integration**

The Chatbot' s SDK interface was embedded into the homepage of the MITS E-Support integrated service platform, with a prominent floating consultation entry. Faculty and students can submit questions directly (e.g., "Campus network not working" or "Low printing quota" ) and receive real-time responses without leaving the page.

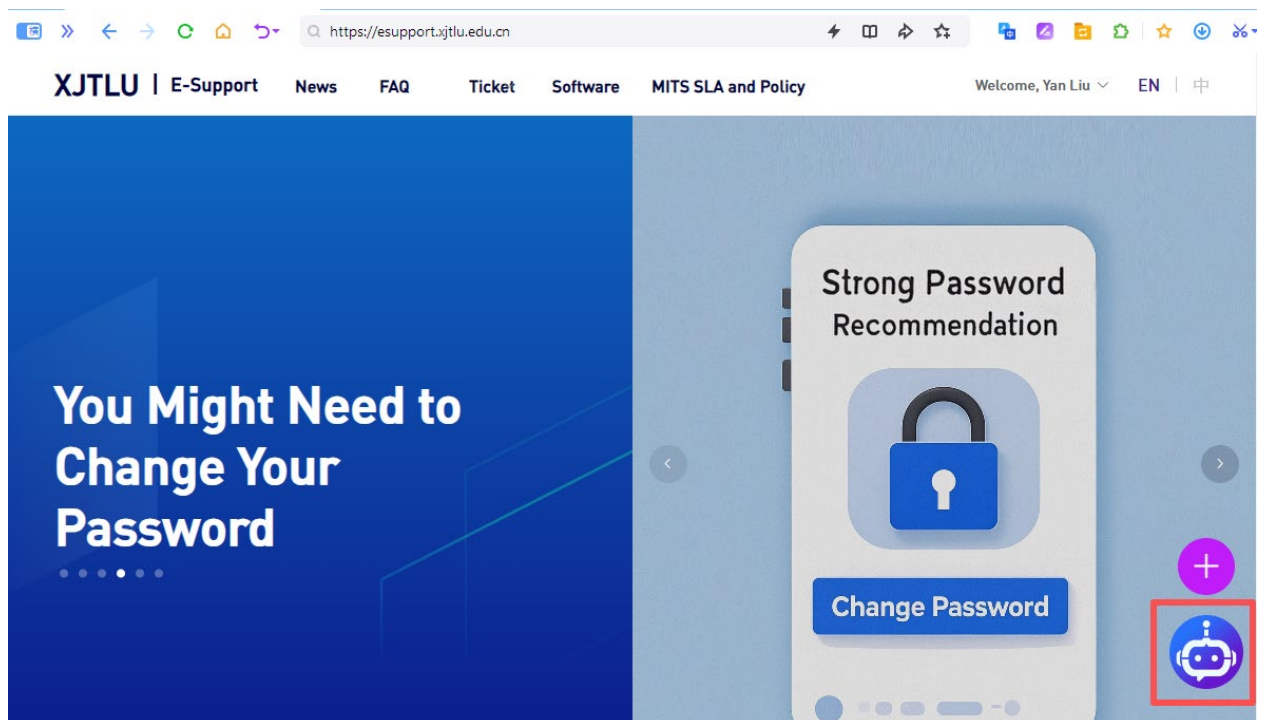


Figure 3-2 eSupport entrance of the Intelligent Q&A Robot for Campus IT

Services

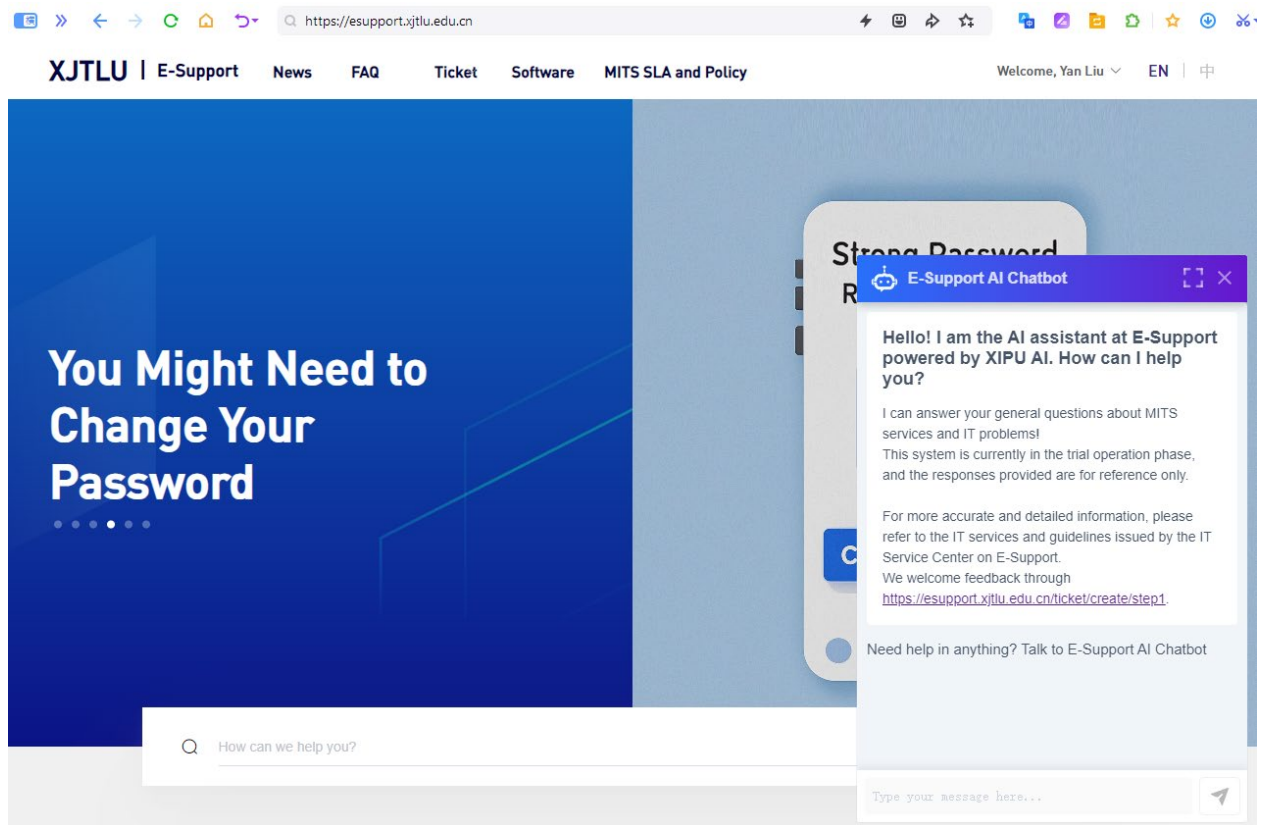


Figure 3-3 Example of the Intelligent Q&A Robot for Campus IT Services

### 3. Outcomes and Benefits

The E-Support AI Chatbot officially entered trial operation on

**December 4, 2024**, delivering significant results:

- **Service Coverage and Response Efficiency**

A total of 1,345 inquiries were received, with 39.3% submitted outside regular working hours (17:00–9:00 the next day and holidays), effectively addressing the issue of “no response after office hours.”

- **Problem Resolution Capability**

Through knowledge base retrieval and model-generated responses, approximately 70% of inquiries were successfully resolved. For basic MITS service-related questions, the resolution rate exceeded 80%, significantly reducing repetitive manual work.

#### **4. Replicability and Promotion Value**

This case demonstrates strong replicability and promotion value and is applicable across a wide range of scenarios. It can be rapidly reused by departments such as the Student One-Stop Service (scholarships and financial aid Q&A), Academic Affairs Office (course selection guidance and exam scheduling inquiries), and Campus Management Office (space and facility services). By simply replacing the domain-specific knowledge base, dedicated intelligent Q&A robots can be quickly deployed to enable intelligent services across multiple scenarios.

#### **5. Next Steps**

To further enhance service capabilities, two key initiatives will be prioritized:

- **Improving Q&A Accuracy**

A closed-loop mechanism of “human feedback–model

iteration” will be established. For questions that the Chatbot cannot answer or answers inaccurately (approximately 30%), human intervention will provide correct responses and supplement the knowledge base. Model fine-tuning via the XIPU AI platform will further improve semantic understanding and reasoning for complex queries, with a target overall resolution rate exceeding 85%.

- **Strengthening Service Data Analysis**

By analyzing high-frequency inquiry topics, time-of-day distribution, and trends in resolution rates, IT service optimization reports will be generated to support campus digital development. These insights will inform proactive measures such as targeted training sessions or system upgrades for recurring issues.