

## AI-powered Digital Human: "Xiao Tu"

### Project Overview

Hengtian has created an advanced AI-powered digital librarian “Xiao Tu” for the National Library of China, provides users with a range of interactive features including real-time Q&A, book recommendations, search capabilities, and even group photo opportunities. With Xiao Tu’s assistance, customers can enjoy a more engaging and personalized library experience across multiple devices such as large screens, PC clients, and smartphones.

The success of this project showcases Hengtian’s strong capabilities in digital design, experience consulting, AI and data capabilities, and software development. Our dedicated team has meticulously crafted customized cross-platform interactive environments that merge digital creativity with practical business applications. This integration not only elevates the user experience but also demonstrates the potential for technology to revolutionize traditional service industries like libraries.

### Highlights of Hengtian Services

#### AI virtual digital person

The digital librarian serves as the face of the library, guiding customers and introducing the content of books to ensure a convenient and efficient user experience. She can appear in various highly customized scenarios to meet different needs, taking on different images. The digital person integrates numerous technologies such as 3D image creation, voice activation, speech recognition, sensitive word filtering, intent recognition, semantic training, model reasoning, speech synthesis and mouth rendering, among others, into one. It also possesses capabilities in expression, action management, behavioral interaction, and deep synthesis.

#### AI data capabilities

The creation of a digital human involves several key stages, including motion capture data processing, facial scanning data processing, and mouth data capture. This process, which

spans from data acquisition to material rendering, merges creativity with technology to ultimately shape the digital human.

Furthermore, the project's service architecture encompasses a broad array of endpoints. It caters to diverse needs by leveraging the Digital People Driving Engine and privately deploying a large model, offering users an extensive range of functional options.

### **AIGC Applications**

Hengtian have fully implemented AI, integrated with the designer's creativity, to produce works for clients rapidly and proficiently. During communication with the client, AI drawing is employed to create multiple concept sketches. These are then combined with reference images to help clients better comprehend the final presentation, fostering mutual understanding. For brief and swift design tasks, AI illustration is utilized to swiftly produce high-quality posters. Besides their immediate commercial use, these AI-generated pieces can serve as raw material for subsequent creative endeavors and customized designs, thus broadening the scope of visual representation possibilities.

### **Voice of the Client**

The Hengtian team demonstrated professionalism and maintained a positive working attitude throughout the project. They effectively collaborated with Library team members, actively contributing ideas and solutions, addressing challenges and provided valuable support to the project's progress. During the trial phase, they swiftly resolved various issues and requests. We anticipate witnessing the continued excellent performance and growth of the Hengtian team in future collaborations.

—— National Library of China Digital Human Experience Project Team