Robots Open Data Portals, Interacting with You to Cover the Two Sessions ——Postprint of Interview with Li Jie, Head of iThink Studio

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Abstract

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Full Text

The Birth of China's First Robot Journalist: An Interview with Li Jie, Head of iSi Studio

Interviewer: During the Two Sessions, iSi participated in coverage as a trainee journalist from Xinhua News Agency, conducting live video programs. Could you briefly introduce iSi Studio and the research and development process?

Li Jie: The idea of creating a robot journalist actually emerged in September 2016. At that time, under the leadership of the Audio-Video Department, the "Xinhua Viewpoint" column was conducting a key research project on artificial intelligence. The special topics team studied AI knowledge while organizing planning, interviews, and editing. To prepare for the research topics, we established a WeChat group dedicated to AI, discussing frontier technology trends and inviting AI experts to give lectures. We spent three months on specialized AI learning. By December 2016, we had completed the six-episode series "China's Opportunities in the First Year of AI 2016," which became the first comprehensive news documentary on AI in China and received departmental recognition for excellence. Through our interactions with various technical teams during the research, we realized that artificial intelligence represents the future direction of media development.

When preparing for Two Sessions coverage in January 2017, the Audio-Video Department leadership strongly encouraged innovation, so we proposed the con-

cept of a news interactive robot for the event. Our initial vision was to create a virtual robot that could interact with audiences on mobile devices about Two Sessions news and related knowledge. Later, we set an even more ambitious goal: to create Xinhua's first physical robot that could appear on camera and conduct interviews directly in video programs. This led to the creation of iSi, a physical robot that not only accomplished its Two Sessions reporting tasks but also became a viral phenomenon on social media, attracting significant attention from young audiences.

Interviewer: Could you describe iSi's basic profile and the establishment of the studio?

Li Jie: iSi was "born" on February 19, 2017, at the iSi Studio of Xinhua News Agency's Audio-Video Department, officially becoming a trainee journalist during the March Two Sessions. The birth date coincides with the anniversary of President Xi Jinping's "2·19 Speech" at Xinhua News Agency. To implement the spirit of that speech and seize the initiative in innovative reporting for the Two Sessions, the Audio-Video Department leadership led the planning and guidance, establishing iSi Studio with the video special topics editing team as the core plus some creative talents from the department. The studio collaborated with external technical teams, investing in robot R&D with an entrepreneurial spirit. iSi integrates China's cutting-edge AI achievements from brain to hardware, partnering with HaiZhi Intelligence for its cognitive systems and Beijing Conners for its hardware—both outstanding domestic technology teams.

iSi's profile includes: nickname iSi, English name Inspire, less than one year old, male, 1.28 meters tall, 60kg weight, born in Beijing at Xinhua News Agency's Audio-Video Department iSi Studio. His occupation is Xinhua trainee journalist, speaking Mandarin and a little English. His companion is People's Daily's "Xiao Rong," and his dream is to ask questions to the Premier at the Two Sessions.

Interviewer: What was the preparation process for iSi's role, personality, language style, and knowledge system?

Li Jie: We conducted comprehensive preparation for iSi's overall role, personality, language style, and knowledge system. For its "brain," we filtered and adjusted basic and general knowledge according to Xinhua's trainee journalist positioning to create a knowledge graph aligned with Xinhua's standards. The Two Sessions knowledge graph was built from scratch, with corresponding functional logic designed accordingly. For the hardware, we conducted comprehensive testing, multi-level debugging, and network adaptability adjustments with the technical teams to ensure on-site performance, particularly optimizing iSi's wake-up methods and response speed. Since software and hardware involved two separate technical teams, substantial 磨合 and preparation were required in the early stages.

Ultimately, iSi's physical design features large eyes, a small body, and simple movements, while its language style is more youthful. We combined Xinhua's

professional temperament with a soft, cute interactive character, aiming to create a serious yet lively reporting style for the Two Sessions coverage. For example, if you ask, "Does the Two Sessions have a holiday?" iSi responds in a cute tone: "You just finished the New Year holiday and already want another break? Let's roll up our sleeves and work hard!"

Interviewer: As a trainee journalist covering the Two Sessions for the first time, how did you ensure the quality of big data selection?

Li Jie: Data serves as nutrition for the robot's brain, generating knowledge that the robot can understand and master. To ensure safety and accuracy in major reporting, iSi's big data retrieval comes from official websites of the National People's Congress and the Chinese People's Political Consultative Conference, as well as Xinhua Online and China.gov.cn, guaranteeing data accuracy. For instance, data on NPC delegates was retrieved from the latest updates on the NPC official website. For broader data sources, we employed algorithmic mechanisms such as data cleaning, fusion, and cross-calculation to ensure knowledge of sufficient quality standards became the robot's skills. Additionally, iSi had support from external partners—Sina Weibo provided big data analysis of Two Sessions hot topics, which editors processed and provided to iSi for publication.

Interviewer: What corpora does iSi's brain currently contain, and what is their scale?

Li Jie: Like the human brain, the robot brain is also complex. We have gradually developed a dedicated corpus for the Two Sessions and information that Xinhua journalists should know. This includes over 5,000 entries on national Two Sessions delegates and corresponding corpora derived from ten to a hundred times more raw materials. For example, you can ask who a certain delegate is or directly ask about their hometown.

Furthermore, the HaiZhi Intelligence bot platform provides iSi with many basic corpora, including tens of millions of location and encyclopedia entries, 300,000 ancient poems, 90,000 idioms, real-time weather for domestic districts and major global cities, and a large volume of humanized casual conversation. If you recite a poem, iSi can tell you its origin. For weather, you can even ask iSi, "Will it rain tomorrow?"

Interviewer: What tasks did iSi primarily assist journalists with during the Two Sessions, and what interactive functions does it support?

Li Jie: iSi collaborated with journalists and editors to complete seven episodes of "Xinhua Viewpoint" and "Xinhua Panorama" special programs, totaling 90 minutes, appearing as an interviewer and host. iSi excels at providing Two Sessions big data analysis, asking questions on behalf of netizens to guests, and transforming monotonous questions into more accessible and engaging formats. Interactive functions include delegate information queries, public opinion collection, Two Sessions news recommendations, Q&A on Two Sessions knowledge, weather queries, ancient poetry interactions, and big data analysis.

Interviewer: How did delegates respond to being interviewed, and how were the viewership ratings for the video content?

Li Jie: iSi interviewed many delegates and experts. For example, when interviewing Pan Chengying, an NPC delegate from Daliangshan, Sichuan, about children at the "Cliff Village" ladder school, the delegate was particularly surprised to encounter such an intelligent robot journalist and warmly invited iSi to visit Daliangshan, hoping more robots like iSi could support education for children in impoverished areas. Zhang Tao, NPC delegate and vice president of the Chinese Academy of Sciences, commented that "Xinhua's launch of the iSi robot journalist is very lively and engaging, particularly in interacting with young people, which helps timely convey Two Sessions messages to society. AI will bring the next technological revolution, and robotics and AI will be a crucial direction."

The "iSi Runs the Two Sessions" short video series achieved over 44.7 million cumulative views. Many individual videos reached over 4 million views. In terms of audience demographics, iSi attracted not only children and young people but also middle-aged and elderly viewers.

Interviewer: We understand that iSi conducted an English-language overseas livestream video. What was the foreign media response?

Li Jie: Yes, this livestream program aired on four major overseas platforms: Twitter, YouTube, Facebook, and Instagram. On Twitter alone, the ten-minute livestream attracted 68,331 viewers and was recommended by major influencers. Many netizens commented: "This little robot is so cute," "China is becoming stronger and stronger," and "Very impressive!" During the Two Sessions, iSi robot journalist became a hot topic overseas, showcasing China's outstanding AI achievements and representing successful agenda-setting. iSi's debut at the Two Sessions coincided with AI being written into the government work report for the first time, with China's AI industry at a developmental inflection point. Overall, iSi not only demonstrated Xinhua's innovation and exploration in intelligent media but also created a favorable public opinion environment for China's AI industry and technological innovation development.

Interviewer: As a product development team member, what do you consider iSi's most distinctive features and innovations?

Li Jie: As the first physical intelligent robot to conduct Two Sessions interviews, iSi's greatest feature is conducting actual interviews in a manner similar to or approaching human methods. First, it achieved an integrated software-hardware solution, including speech recognition, semantic understanding, speech synthesis, and partial movements and expressions, enabling smooth dialogue with interview subjects. Moreover, iSi can recognize people through facial recognition and semantic understanding, then communicate and ask questions based on their background.

Second, iSi not only possesses Two Sessions and interview-related knowledge but

also masters hundreds of millions of Chinese knowledge graph entries covering society, culture, daily life, weather, and other encyclopedic knowledge, with dynamic learning and updating capabilities.

Third, iSi is an effectively controllable robot, a product of human + intelligence mechanisms. From the knowledge system to machine learning training mechanisms, it can be operated by editors and domain experts without requiring complex AI technical knowledge—only simple training and mastery of a robot brain management toolset.

These features and innovations represent the integration of multiple cutting-edge AI technologies, reflecting the latest achievements in China's AI industry development. For instance, natural language understanding is achieved through lexical, syntactic, and even discourse-level mechanisms, plus multi-layer machine learning methods. Deep learning techniques like RNN (Recurrent Neural Networks) extract sentence main structures, while CNN (Convolutional Neural Networks) classify intent domains. Knowledge graph technology involves crawling, cleaning, fusing, and cross-calculating various types and sources of data, especially unstructured text, to form comprehensive, timely, and quality-assured knowledge graphs that enable iSi's question-answering interaction functions including understanding, reasoning, recommendation, and memory.

Interviewer: In video programs, iSi completed interviews independently. How was the question design implemented?

Li Jie: On one hand, iSi automatically extracts viewpoints or question clues from large volumes of text data. On the other hand, it supports direct human intervention—editors can set question keywords, and iSi can respond according to editorial intent upon recognizing these keywords. Many of our video programs showcased the human-computer interaction process in its original form. Attentive viewers would notice that before iSi asks questions, the host often provides keyword prompts to guide iSi's questions to guests.

Interviewer: Will robot journalists become a new trend for future major topic reporting?

Li Jie: I believe this is certainly the direction for future media development. Future media competition will focus on human-machine collaborative reporting models, where robots serve as assistants and tools for journalists and editors, improving reporting efficiency and enriching content, particularly with inherent advantages in big data analysis. Therefore, we must quickly learn and utilize AI technology rather than ignore or reject it. As science fiction writer Han Song said in his interview with iSi, AI technology is like a speeding train—if we don't board it now, we may be left far behind, unable to catch up.

Interviewer: How does the studio model within Xinhua's Audio-Video Department coordinate with regular work responsibilities, and what reflections do you have on this internal studio model for product innovation after the Two Sessions?

Li Jie: The iSi Studio was established as an innovative mechanism under the Audio-Video Department's support, with all members being part-time editors who voluntarily participated with an entrepreneurial spirit while completing their regular duties. To balance responsibilities, we used the iSi robot to complete some of our special topics room's daily reporting tasks.

After the Two Sessions, the iSi Studio continues exploring new possibilities. We believe interactive news models represent the future development trend, and iSi will acquire more capabilities. We hope more media professionals will join this wave of innovation.

Note: Figure translations are in progress. See original paper for figures.