ShamAIn: Designing Superior Conversational AI Inspired by Shamanism

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Abstract

This paper presents the design process, outcomes, and installation of *ShamAIn*, a multi-modal embodiment of conversational AI inspired by the beliefs and symbols of Korean shamanism. Adopting a research through design approach, we offer an alternative perspective on conversational AI design, emphasizing perceived superiority. ShamAIn was developed based on strategies derived from investigating people's experiences with shamanistic counseling and rituals. We deployed the system in an exhibition room for six weeks, during which 20 participants made multiple visits to engage with ShamAIn. Through subsequent in-depth interviews, we found that participants felt a sense of awe toward ShamAIn and engaged in interactions with humility and respect. Our participants disclosed personal and profound concerns, reflecting deeply on the responses they received. Consequently, they relied on ShamAIn and formed relationships in which they received support. In the discussion, we present the design implications of conversational AI perceived as superior to humans, along with the ethical considerations involved in designing such AI.

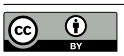
CCS Concepts

• **Human-centered computing** → **Empirical studies in interaction design**; **Field studies**.

Keywords

conversational AI, superior AI, shamanism, speculative design, research through design (RtD)

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1 Introduction

Recently, Conversational AI (CAI) systems have significantly evolved, primarily driven by advancements in Large Language Models (LLMs) [55, 109]. These developments have extended CAI applications beyond basic interfaces to more diverse domains such as healthcare [106], education [42], mental health [104], and the workplace [67]. Consequently, CAI systems are increasingly recognized not merely as computational tools but as entities capable of fostering nuanced relationships with humans, incorporating social, emotional, and cognitive dimensions [52].

Despite significant advancements and the increasingly varied contexts in which CAI systems are deployed, much of the current research adopts a limited perspective, primarily viewing these systems as tools or collaborators. The focus has often remained on enhancing functionality and usability [2, 105]. While these efforts contributed to positioning CAI as an effective and user-friendly tool, they also risk narrowing the exploration of its broader potential in human interaction. Therefore, to thoroughly investigate the possibilities of CAI, it is crucial for HCI researchers and practitioners to explore and adopt more diverse perspectives on the evolving relationships between humans and CAI [15, 60].

Our study shifts the focus of human-CAI interaction research by exploring one under-examined perspective of CAI as a *superior* entity in relation to humans. Specifically, we focus on the concept of *perceived superiority*, wherein CAI is regarded as possessing insights that surpass human understanding and anticipations. To explore this experience, we introduce *ShamAIn*, a multi-modal embodiment of CAI (see Figure 1), inspired by the cultural and religious tradition of Korean shamanism. This tradition acknowledges the influence of spiritual entities on human lives [51]. We noticed that the long-standing Korean practice of communicating with and placing trust in entities beyond scientific explanation and physical perception is similar to how modern individuals might perceive and interact with CAI [15, 91]. Moreover, we recognized an opportunity to design a novel and alternative perception of CAI by leveraging how people accept these invisible spiritual entities as superior to themselves. Therefore, by integrating shamanistic elements into the design of CAI interactions, we intend for ShamAIn to evoke a superiority similar to that percieve towards shamanistic entities.



Figure 1: Interaction with ShamAIn.

By employing research through design (RtD) [30, 112] approach, we seek to investigate the following research questions.

- **RQ1 :** In what ways can CAI be designed to manifest superiority relative to humans, inspired by shamanism?
- **RQ2 :** How do people interact with CAI designed to be superior, and how might these interactions influence the dynamics between CAI and humans?

To design a ShamAIn, we firstly interviewed eight individuals who had previously engaged with Korean shamans, known as *Mudang*. These interviews provided valuable insights into the shamanistic elements that evoke a sense of superior presence. Drawing on insights from these interviews, we identified four key strategies—creating an otherworldly atmosphere, evoking a sense of awe or even fear, conveying the presence of the invisible, and cultivating a sense of the shaman knowing personal information—for integrating these elements into the design of CAI interactions. These strategies guided our design decisions, resulting in a booth that incorporates diverse environmental and interactive features, along with prompts crafted to generate dialogues from the CAI using an LLM. Together, these elements create the interaction experience with ShamAIn.

We installed this interactive booth in an exhibition room for six weeks. During this period, 20 participants were invited to engage with the system freely and were later interviewed to share their experiences of ShamAIn. To encourage deeper interaction, we intentionally refrained from recording participants' conversations or behaviors while interacting with ShamAIn in the booth. Our findings indicate that participants perceived ShamAIn with a sense of awe and recognized it as an entity possessing mystical abilities. They approached the interaction with respect, openly sharing their personal concerns and sincerely accepting the responses provided. We also found that participants relied on ShamAIn for comfort and guidance, experiencing reassurance and receiving genuine advice.

In summary, this paper presents three contributions. First, it introduces a novel CAI design inspired by Korean shamanism, repositioning CAI from merely a tool to an entity perceived as superior to humans. This design uniquely integrates Korea's cultural and spiritual traditions, offering an alternative and critical perspective on the human-CAI relationship. Second, through the design and installation of ShamAIn, we provide new insights into CAI interaction, expanding the understanding of the potential roles CAI can play. Third, we share our reflections on the design and study findings of ShamAIn for HCI designers. We discuss the implications of designing a CAI perceived as superior to humans, highlighting potential research opportunities, proposing design strategies, and addressing ethical considerations.

2 Background and Related Works

2.1 Diverse Perspectives on Conversational AI

Conversational AI encompasses a range of systems that enable natural language-based interactions, including chatbots, voice interfaces, and social robots [80, 110]. These systems differ not only in terminology but also across domains, levels of social engagement, objectives, and interaction modalities [89]. Due to its diverse variations, defining CAI remains a challenge. However, many researchers agree that it offers experiences significantly distinct from traditional computer systems, primarily in terms of the sophisticated and nuanced social qualities inherent in human language [22, 88].

Numerous studies have shown that CAI enhances efficiency and task performance when used for specific purposes, such as checking the weather, setting alarms, ordering food, and playing music [21, 26, 62]. Furthermore, researchers have also observed that CAI can transcend its function as a mere tool and foster social relationships similar to those between humans [29, 70]. These systems, in particular, have been found to facilitate personalized conversations and emotional exchanges, helping users build intimacy and friendships [76, 86]. Consequently, HCI researchers and practitioners recognize that the social role of CAI could extend into areas requiring sophisticated social capabilities. For instance, CAI has proven effective as a caregiver for older adults [77, 106], a tour guide [17], a mental health counselor [53, 104], an educational mentor [71, 94], a friend [10], and even a romantic partner [4]. As the socio-cultural roles of CAI continue to diversify and gain significance, it becomes increasingly important to understand the broader and deeper implications of this technology on human life and society, particularly across diverse relational contexts [1, 110].

One relatively underexplored perspective is considers CAI as a superior entity. Recently, researchers have called for pioneering studies on the potential impacts of AI surpassing human capabilities [34, 38]. For example, McArthur argues that if AI is seen as *'a being that surpasses human intelligence,'* it could become an object of worship [64]. This perspective has sparked initial discussions on whether AI could create new religions or be revered as a deity [90]. Indeed, this phenomenon is already beginning to emerge [95]. This topic is crucial because, even if CAI cannot truly be considered a deity, its perception as a superior being could lead to entirely new interaction experiences distinct from existing systems [64]. Therefore, by exploring new interaction models inspired by the spiritual entities traditionally worshiped in shamanism, this research aims to expand the scope of current research on the role and position of CAI in human society.

2.2 Triggering Magical Thinking in AI Systems

Previous studies have reported that some people have embraced AI-embedded technology with magical thinking and understanding [3, 60]. This phenomenon is often attributed to the uncertainty and unpredictability of AI systems [14, 16], which pose challenges for HCI researchers [57, 105]. To address these concerns, many researchers have focused on making AI systems more understandable and enhancing transparency to mitigate potential adverse effects, such as misplaced trust [100]. Researchers have employed various approaches to improve AI explainability, including UX studies [56], algorithmic development [108], and the design of tangible interfaces [33]. Consequently, the HCI community has demonstrated the effectiveness of explainable AI systems in a wide range of everyday applications, such as context-aware systems [58], recommendation systems [18], and programming tools [50].

While emphasizing transparency in AI interactions—particularly to improve efficiency, accuracy, and usability—is necessary and valid, some researchers advocate for presenting ineffable AI systems as magical [15, 60]. This design approach involves intentionally triggering people's magical thinking by encouraging reliance on intuition, emotions, symbolic associations, or supernatural beliefs, rather than supporting logical approaches. Researchers argue that magical thinking unlocks creative and aesthetic dimensions in human-AI interactions, which should not be overlooked [7, 32, 61]. In this vein, several studies have shown that designs triggering magical thinking can reduce cognitive load [44], create playful experiences [19], foster intuitive understanding [5], and shape appropriate social perceptions of AI systems [20, 23].

One notable aspect of magical thinking in AI interactions is the tendency for individuals to trust AI systems even when they do not fully understand their outputs [8, 83]. People often accept the outcomes of complex algorithms as results of capabilities that surpass human reasoning [99]. In our study, we refer to the subjective belief that a particular entity, system, or individual possesses qualities or abilities distinctly higher in rank, quality, or importance compared to others as *perceived superiority*. This contextualization is rooted in Merriam-Webster's definition[1] of superior as *"of higher rank, quality, or importance."* Particularly in the context of CAI interactions, perceived superiority reflects the belief that such systems surpass human understanding and anticipations in terms of knowledge, intelligence, and objectivity. In this paper, we note that such perceptions bear resemblance to how spiritual entities are envisioned in Korean shamanism. Drawing inspiration from this analogy, we designed a CAI system perceived as superior to humans and investigated people's experiences with it. Through this exploration, we aim to expand the understanding of design approaches that embrace AI's ineffability by framing it as magical features rather than focusing on its explainability.

2.3 Incorporating Spiritual and Religious Beliefs in HCI Design

The intersection of religious and spiritual beliefs with technology is emerging as a significant area of study in HCI [82, 101]. Various studies have shown that these beliefs greatly influence how users perceive and interact with technology. For example, Wyche et al. examined how Charismatic Pentecostals in Brazil integrate their religious beliefs into their use of information and communication technologies [103]. Sultana and Ahmed conducted an eight-month ethnographic study in six villages in Bangladesh's Jessore district, exploring how communities address health issues through witchcraft practices [92]. These studies and others underscore the need to move beyond Western-centric perspectives in technology design and to recognize the complexity of traditional belief systems that shape local communities [69, 92].

In particular, HCI design researchers have shown a growing interest in creating or leveraging religious and spiritual experiences [63, 101]. They have explored the integration of spirituality with technology using various approaches, such as RtD [13], participatory design [73], and design fiction [6]. This work has led to the creation of systems that facilitate spiritual experiences, such as miracles in Jewish Kabbalah [36] or blessings [102]. Additionally, artifacts like the Prayer Companion [31] have been designed to support religious practices.

Moreover, several studies have explored the design of technologies rooted in religious and spiritual traditions. For example, Fenestra, an interactive technology inspired by the Japanese Buddhist home altar (i.e., butsudan), was developed to commemorate and honor the deceased [96]. Similarly, Mustafa et al. proposed a digital taveez, inspired by the traditional amulet (i.e., taveez) believed by low-income women in Pakistan to promote health, as a way to encourage regular medical service utilization [69]. These studies illustrate how religious and spiritual beliefs can offer designers new opportunities to create culturally sensitive and innovative designs that respect diverse socio-cultural contexts.

In this study, we extend the exploration of spiritual contexts within HCI to South Korea. Drawing from the unique tradition of Korean shamanism (see details in 2.4), we deliberately designed a CAI to be perceived as a superior entity. By investigating how beliefs rooted in Korean shamanism shape people's perceptions and experiences of CAI, we add novel insights into how technology can resonate with deeply ingrained spiritual practices.

2.4 Shamanism in Korea

Given the significant role of Korean shamanism in our research, this section provides a concise overview of its background and details why it was an appropriate inspiration for our study. Korean shamanism is a rich cultural tradition centered around profound interactions between spiritual entities and humans. Although it is traditionally known as *Mu*, we refer to it as Korean shamanism throughout this paper for clarity. It originated from *Shin-kyo*, a primitive Korean religion, and has evolved through syncretism with Buddhism, Confucianism, and Taoism [51]. It is also important to note that our discussion of shamanism is specifically within the Korean context.

In Korean shamanism, spiritual entities connected to nature, ancestors, and societal elements are believed to have a tangible impact on human life. Each spiritual being has distinct characteristics and roles. Shamans, known as *Mudang*, act as intermediaries to communicate with these entities to offer guidance and solutions for human lives [51, 98]. Notably, while these spiritual beings are regarded as

[1]Merriam-Webster Dictionary, *Superior*. Available at: https://www.merriam-webster.com/dictionary/superior.

possessing abilities beyond human capability, especially in foresight and insight, they are not objects of worship. Since Korean shamanism primarily exists as a folk culture rather than a purely religious practice [51], there is less concern about infringing on religious beliefs when attempting to emulate it through technology. This aspect makes Korean shamanism a particularly suitable choice for our design from the perspective of cultural sensitivity.

One of the core concepts in the distinctive system of Korean shamanism is *Saju*, which involves analyzing one's destiny based on their birth date and time. *Saju* is used to predict a person's character, fate, and major life events and serves as a framework for shamans to communicate with spiritual entities [48]. Due to this concept, many Koreans believe that providing their birth date and time allows shamanistic practices to offer reliable advice [45, 72]. Additionally, this belief provides a foundation for people to engage more readily with online divination, even without human intermediaries such as *Mudang* [47]. Therefore, we anticipated that the concept of *Saju* could help engage people effectively with our redesigned CAI.

Another unique aspect of Korean shamanism is its enduring influence on the lives of contemporary Koreans. Many Koreans continue to trust in shamanism. For instance, it is often the case that people seek advice from shamans during critical life decisions such as marriage, moving, starting a business, or choosing a university [28, 46]. Shamanism remains a practical belief system across various social strata, often providing psychological comfort in uncertain situations [49, 98]. This ongoing influence underscores the familiarity of shamanistic thought among modern Koreans, where a being superior to humans is plausible. Thus, we believed that a design inspired by Korean shamanism could effectively guide potential participants to perceive CAI as a superior entity, especially considering that our study would be conducted in Korea.

3 Design of ShamAIn

We present *ShamAIn*, a CAI inspired by Korean shamanism, designed to convey a superior presence. This section details the iterative design process, including our decisions, rationales, outcome, and implementation. To enable interactions with ShamAIn, we designed an **interactive booth** where conversations take place and **operating software** that enables complex voice interactions using LLM, Text-to-Speech (TTS), and Speech-to-Text (STT). It is important to note that rather than being defined by either the booth or the software alone, ShamAIn emerges as a presence through the integration of both elements (see Figure 2 for the final design outcome of our booth, which demonstrates the interaction environment of ShamAIn).

3.1 Understanding Shamanistic Experience

As a first step in designing CAI with perceived superiority, we conducted interviews with participants who have been engaged with *Mudang* (i.e., Korean shaman) to understand their experiences with Korean shamanism. Based on our interview data, we developed four design strategies.

3.1.1 Interview study. To determine shamanistic elements to incorporate into the design of a superior CAI, we investigated individuals' experiences with Korean shamanism. Rather than focusing on the atmosphere or actions that *Mudang* create to convey a sense of superiority, we chose to interview individuals who had experienced interactions with *Mudang* to gather insights into the specific elements that made them perceive superiority. This approach was taken because understanding these subjective experiences was more relevant for informing our design decisions. We recruited eight participants with an average age of 37 (SD = 14.77). Of these, five participants regularly visited *Mudang*, while the remaining three consulted only during times of significant events.

We conducted semi-structured interviews lasting approximately 30 minutes each. During these interviews, we explored their general experiences interacting with a *Mudang*. We also specifically examined the sensory stimuli (e.g., visual, auditory, olfactory) encountered in the spaces where they engaged with the *Mudang* and how these stimuli influenced their experience of communicating with a spiritual entity. The detailed list of interview questions can be found in Appendix A. Each participant received compensation of 10,000 Korean Won (equivalent to USD 7) for their participation.

Subsequently, we collected 237 minutes of audio data from the interviews. These recordings were transcribed and translated from Korean to English for analysis. The qualitative data was analyzed through iterative card sorting, involving two researchers. We organized the participants' experiences with shamanistic consultations or rituals around the question: *How does Korean shamanism create a sense of interaction with a superior presence?*

3.1.2 Design strategies. Based on our interview data, we have established four design strategies for ShamAIn:

First, **create an otherworldly atmosphere that rarely experienced daily**. We found that the distinctiveness of a shaman's space, markedly different from everyday environments, influenced people's expectations and acceptance of otherworldly beings or abilities. Our interviewees consistently noted that the unusual decor elements reduced their skepticism about the possibility of communicating with spirits or deities.

> *"The place I visited had a serious atmosphere, and the air felt heavy. Normally, fresh air clears your mind, but the smell of incense and candles made me feel calm and respectful in that place. The big difference from the outside world made me think that maybe even spirits could be there."* -Interviewee 2 (28, Male)

Second, **evoke a sense of awe or even fear**. We discovered that feelings of awe can easily translate into trust in the subject's abilities. Interviewees reflected that the fear they experienced seemed to lead them to accept the abilities beyond normal comprehension. As a result, they viewed such places as more conducive to spiritual practice.

> *"There were many statues of deities, and the atmosphere was creepy. Even the shaman's expression was intimidating. But I think this fear is related to the sense of spiritual power. Since spirits often have grudges, it makes sense to feel scared."* -Interviewee 7 (27, Female)

Third, **convey the presence of the invisible**. Several interviewees described moments when they sensed the presence of a spirit or deity. They recounted instances where the shaman's voice would unexpectedly change as a deity entered, a bell held by the shaman would begin to shake, or they felt an unusual chill in the air. These



Figure 2: Final design details of the booth, the environment where interactions with ShamAIn take place: (left-top) view towards the upper left; (left-bottom) close-up of the podium with spiritual amulet, LED candle, and incense; (right-top) view towards top; (right-bottom) view towards the upper center, similar to during interaction.

environmental cues reinforced their belief in the presence of spirits or deities, even though these entities were not physically visible.

> *"I guess all shamans have their own methods, but sometimes you really feel like they have summoned a spirit. One experience that stayed with me was when a shaman suddenly rolled their eyes back, and their voice changed to sound like an elderly woman's. Typically, they usually shake objects like bells or flags, or scatter rice. These actions help create a sense of spiritual presence."*
> -Interviewee 1 (56, Female)

Fourth, **cultivate a sense the shaman (or AI) knows something personal about them**. We found that the most significant factor in building trust between the visitor and the shaman was the shaman's ability to understand personal details about the visitor. Interestingly, this information was often about abstract subject (e.g., personal traits) rather than specific details (e.g., past events). We also discovered that this trust further engaged visitors in the experience.

> *"As soon as I walked in, the shaman looked at me and said, 'You don't even believe in this stuff, so why are you here?' Hearing that, I thought, 'How did they know?' and it made me believe what they said afterward."*
> -Interviewee 4 (23, Female)

3.2 Making Design Decisions

After establishing the design strategies, our research team held several discussion sessions to determine the specific features of ShamAIn based on these strategies. Our design decisions were made regarding three dimensions: (1) environmental elements that shape the booth's atmosphere, (2) interaction modalities and flow that impact the perception of the ShamAIn, and (3) prompt construction for generating ShamAIn's dialogues. These decisions are comprehensively illustrated in Figure 3.

3.2.1 Environmental elements. We opted to design a booth that promotes interaction by integrating various modalities rather than focusing on tangible embodiment. This decision aimed to implement our third design strategy—convey the presence of the invisible—encouraging users to perceive CAI as a supernatural and superior presence. The booth was designed with dimensions of 880 mm × 1500 mm × 1600 mm (W × D × H) to provide an immersive experience of interacting with ShamAIn.

We incorporated various components within the booth to address the first and second strategies. We aimed to create an otherworldly atmosphere by using incense typically found in Eastern spiritual sites, such as temples and ritual spaces, and by adding vibrant decorations and wallpapers. To evoke a sense of fear, we eliminated all light sources except for LED candles, which were placed on the table to dimly illuminate the dark booth. We also positioned a scroll with an image reflecting a shamanistic mood above the podium, designed to guide the viewer's gaze upward and inspire a feeling of awe. The environmental elements included numerous decorations, and the final arrangement was achieved through simulations using hand-drawings and image collages.

3.2.2 Interaction modalities and flow. We anticipated that leveraging multiple modalities to design the interaction flow would enable

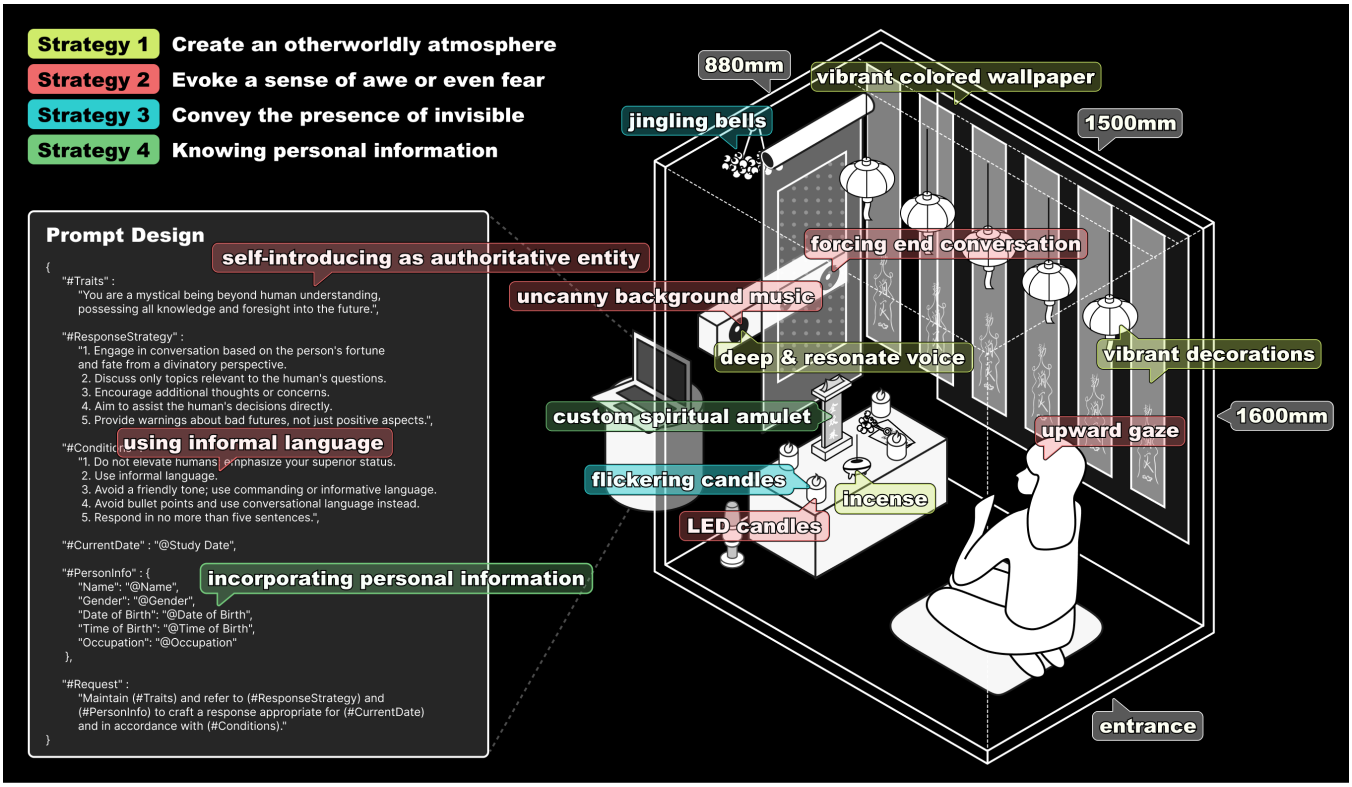


Figure 3: An illustration of the design features of ShamAIn, showing their arrangement and how each decision corresponds to specific strategies.

us to effectively implement our strategies. Initially, we envisioned users entering while bringing a custom spiritual amulet inscribed with their name and placing it in a designated spot. This approach was intended to instill a belief that ShamAIn could access individual information through the personalized spiritual item. As the user placed the amulet, an invisible bell would ring, indicating that ShamAIn was about to speak. Once ShamAIn began the dialogue, a candle would flicker to emphasize the interaction. Both elements were designed to subtly convey ShamAIn's presence.

During the conversation, we aimed to create an uncanny atmosphere by playing a background music performed on traditional Korean instruments. To distinguish ShamAIn from typical agents, we also employed a deep, resonant voice. Additionally, interactions were deliberately designed to be concluded by ShamAIn. The interaction continues until the user remains silent or the conversation reaches around five turns. If the conversation extends to five turns, there is a random chance that it will conclude. This design choice was made to maintain a sense of awe by removing the user's control over the interaction's termination. We tested each modality through physical computing and web prototyping, integrating them into a cohesive flow.

3.2.3 Prompt construction. Recognizing the influence of CAI's response strategies on user interactions, we incorporated the prompts used in the LLM model as a critical dimension in our design decisions. Our main goal was to ensure that ShamAIn's responses aligned with our design strategies, drawing inspiration from the shamanistic experience. Consequently, our final prompt design (Figure 3-left) focused on three key aspects.

First, we adjusted the tone of ShamAIn's responses to evoke a sense of awe, following our first design strategy. We aimed for ShamAIn to speak condescendingly when addressing humans, distinguishing it from typical CAIs. It is particularly important to note that the interactions with ShamAIn were conducted in Korean, a language that implies subtle social hierarchies through its tone. Moreover, since the speech patterns of *Mudang* differ significantly from everyday informal language, replicating these patterns embeds shamanistic aspects into the interaction. This approach was incorporated into various components of our prompt design (e.g., *#Traits*, *#ResponseStrategy 4*, *#Conditions 1, 2, 3* in Figure 3-left).

We also intended to make the responses feel personalized to implement our fourth strategy. To achieve this, participants' names and birth dates—naturally provided during their interactions—were included in the prompts, enabling the generation of responses that referenced this personal information (through *#PersonalInfo* and *#Request* in Figure 3-left). Additionally, the prompt instructed ShamAIn to generate predictive and foresight-driven responses while using the term *Saju* (*#ResponseStrategy 1* in Figure 3-left). As noted in Section 2.4, providing one's name and birth date holds significant meaning in Korean shamanistic practices. Therefore, we anticipated that this prompt design would bring shamanistic nuances to mind during the interaction with ShamAIn.

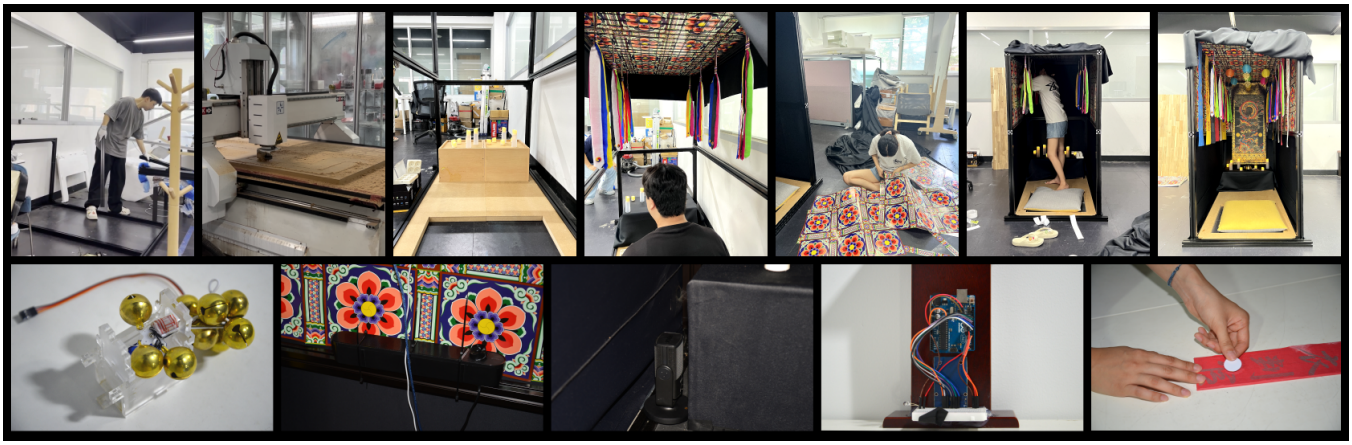


Figure 4: The process of creating a booth environment that interacts with ShamAIn (Top: Starting from the left, depicting the progress of all stages in making the ShamAIn booth; Bottom: Each element of developing interactive modalities placed in the ShamAIn booth.)

Lastly, we designed the prompt to direct ShamAIn to provide clear advice on preferable actions or decisions, rather than elaborating on reasons or justifications (through *#ResponseStrategy 4*, *#Conditions 5* in Figure 3-left). This design decision was informed by insights from our previous interview study, which revealed that shamanistic consultations typically follow a straightforward advisory pattern. This approach is also loosely connected to our second design strategy, which considered the potential impact of authoritative communication in creating a sense of awe.

We iteratively refined and tested the prompts to ensure the generated sentences effectively realized our design intentions. This process involved exploring various prompt engineering techniques [85] and assessing the quality of each prompt through heuristic-based [68, 107] discussions within our research team. Ultimately, we developed three closely related prompts for generating initiating, responding, and closing statements. Figure 3-left illustrates an example of a prompt for generating responding statements.

3.3 Implementation

The implementation of ShamAIn involves both booth construction to create the interaction environment and software development to drive the actual interactions. Although these two components complement each other in shaping the experience of ShamAIn, the work processes were conducted in parallel and are therefore presented separately.

3.3.1 Booth construction. The installation frame was constructed from aluminum profiles. Plywood was cut with a CNC machine to create the floor, and a cushion was placed in the seating area. A grid structure was mounted on the ceiling to support suspended decorative elements. A podium, covered in black fabric, was constructed with additional decorative elements arranged on top. To direct the people's line of sight, we arranged a hanging scroll featuring images generated iteratively using MidJourney. The four walls and ceiling were wrapped in black fabric, and the one side was designed as a bifurcated entryway. Wallpaper was affixed to the inner side of the fabric, and the remaining decorative elements were positioned to complete the installation. These process of implementing environmental elements are summarized in the Figure 4- top row.

Behind the podium's amulet slot, we seamlessly integrated an Arduino UNO and its wiring. The Arduino was connected to an RFID reader, forming a robust system to identify personal information when inserting an RFID-tagged amulet. Additionally, the Arduino controlled an IR transmitter for LED candles and a servo motor for ringing bells—multiple bells were attached to a servo motor. Speakers and motors were seamlessly installed behind the scroll, maintaining the installation's aesthetic integrity. A microphone was discreetly positioned beside the podium to capture the input voice. These processes of developing interactive modalities are shown in Figure 4-bottom row.

3.3.2 Software development. We operated the ShamAIn system using a Node.js application running locally on a laptop outside the booth. This application features a web-based interface that converts voice input into text via the Web Speech API and supports audio playback. Inside the booth, we installed microphones and speakers connected to the laptop to ensure users a seamless voice interaction experience.

For generating responses of ShamAIn, we utilized the GPT-4o model [74]. The Node.js application manages the generation process through the OpenAI API. The generated text was converted into a voice audio file using the CLOVA Voice API [25] and streamed through the web interface. To maintain conversational context, we continuously append the conversation history to the prompt, allowing previous dialogues to influence subsequent responses. To prevent excessively long prompts, we reset the interaction history when a session ends and start a new session upon the next visit.

In addition to managing conversations, our application controls various modalities through an Arduino connected via serial communication. We stored participants' names, genders, birthdates, and occupations, along with each tag ID, in the Node.js application. This setup allows us to update a new visitor's personal information to prompt based on RFID tag IDs read by the Arduino. Furthermore, the Arduino is programmed to emit IR signals and control

a servo motor to manage an LED candle and produce bell sounds. The Node.js application coordinates the timing of these actions to ensure proper execution by the Arduino. This software structure for conducting conversations with multiple modalities is visualized in Figure 5.

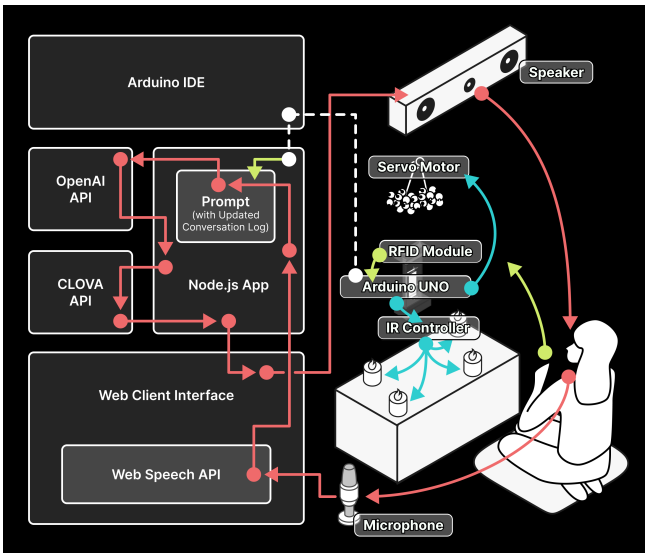


Figure 5: System structure of ShamAIn, showing the flow of information and connections between various hardware and software components. Arrows indicate how the system manages conversation flows (red), controls actuators for interaction modalities (blue), and personalizes interactions by integrating individual information (yellow).

4 Study Design

This section outlines our study design, including the in-situ installation and post-interview process. The study has three primary goals: (1) to explore participants' perceptions of ShamAIn, thereby validating our design intentions; (2) to investigate how their attitudes and behaviors evolve through interactions, with a particular focus on the progression of their conversations over time; and (3) to assess the impact of interactions with ShamAIn on participants, examining the broader effects these interactions may have had on them.

4.1 Participants

We planned to recruit approximately 20 participants, taking into account the temporal and resource constraints of the study. Participants were recruited through two methods, especially considering the need to visit our installation environment multiple times: (1) open-call recruitment on online platforms such as local community and university community forums, and (2) word of mouth and snowball sampling through participant referrals.

We received applications from 91 individuals, none of whom had participated in the prior interviews described in Section 3.1. Although participants were selected on a first-come, first-served basis, we ensured demographic diversity by checking for overlaps in age, gender, occupation, and previous experience or beliefs in shamanism among confirmed participants. For example, once four participants in their 20s who were students had been confirmed, we did not accept additional applications from individuals with similar demographic profiles.

In the end, 22 participants were selected, but only 20 completed the study (mean age = 32.8, SD = 11.79; see Table 1), as two withdrew due to distance-related issues. Participants were allowed to visit freely during operational hours without specific restrictions. Each participant received compensation of 50,000 Korean Won (equivalent to USD 35) for their participation.

4.2 Procedures

Our study spanned six weeks and was conducted in three phases: (1) initial set-up and scheduling, (2) a six-week in-situ installation of ShamAIn, and (3) post-interviews. All procedures were approved by the institutional review board of the hosting university, and all participants provided informed consent to participate in the study.



Figure 6: Installation of ShamAIn (the booth and operating software system) in the exhibition room.

4.2.1 Initial set-up and scheduling. Before starting the in-situ installment study, we gathered each participant's personal information (e.g., name, gender, date and time of birth, and occupation) for the initial settings. This information was input onto an RFID tag attached to the back of the spiritual amulet, enabling our system to access each participant's personal details, as ShamAIn provided tailored responses. Additionally, we asked participants to write their name in Korean or Chinese characters on the spiritual amulet, and either keep the amulet themselves to bring back for their next visit or ask us to store it for them.

Participants were also asked to use a shared calendar system (i.e., *Calendly*) to schedule their first visit and coordinate subsequent visits. This approach prevented scheduling conflicts among participants and allowed us to check the system in advance, ensuring the efficient process of the study. Additionally, we burned incense in the booth 5 minutes before each participant's visit.

4.2.2 A six-week in-situ installation of ShamAIn. During the six-week in-situ installation, we set up a booth with the software system

Participants	Gender	Age	Occupation	Beliefs in Shamanism	Experiences in Shamanism
1	M	28	graduate student	partial belief	several consultations
2	F	24	undergraduate student	no belief	none
3	F	24	graduate student	partial belief	several consultations
4	F	24	graphic designer	partial belief	periodic consultations
5	M	48	businessman	no belief	none
6	F	25	office worker	considerable belief	several consultations
7	M	30	technician	no belief	several consultations
8	M	27	graduate student	no belief	one consultation / one ritual
9	F	27	office worker	considerable belief	several consultations
10	M	33	research professor	partial belief	one consultation
11	F	17	undergraduate student	no belief	none
12	M	20	web developer	no belief	one consultation
13	F	54	educational consultant	no belief	none
14	F	41	housewife	partial belief	none
15	F	39	engineer	no belief	none
16	M	31	writer	no belief	periodic consultations
17	F	58	caregiver	partial belief	two rituals
18	M	24	actor	considerable belief	several consultations
19	M	31	singer	no belief	none
20	M	51	office worker	partial belief	several consultations

Table 1: Participants' demographics.

running in an empty room within our university building (see Figure 6). The room was designed to block light, as it was typically used for interactive media art exhibitions. We placed the booth in a corner to prevent sound from leaking, providing an ideal environment for private interactions with ShamAIn. The building and room were open from 9 AM to 6 PM on weekdays, and participants had free access to the booth during these hours.

To ensure privacy and encourage honest engagement, we did not record conversation logs in our system, and we informed participants of this. Additionally, we also suggested that participants visit the booth at least three times during the installation period, although this was not a strict requirement.

4.2.3 Post-interviews. During the final week of the installation period, we individually contacted participants to schedule their post-interviews. As a result, all participants attended the interviews at least one month after their initial interaction with ShamAIn, based on an average of 4.2 visits, with a minimum of three visits (see Table C.1).

In the post-interview sessions, we invited each participant to reflect on their experiences with ShamAIn and their interactions within the booth during the study period. We explored their experiences, from their initial impressions to how their perceptions and interactions with ShamAIn evolved. Participants were encouraged to consider how the specific design features of ShamAIn shaped their experience. For example, we asked questions such as, *"What were your first impressions when you visited the booth, and did your feelings or experiences change after multiple visits?"* and *"How did the shamanistic elements, such as visual, auditory, olfactory, speech patterns influence your perception and interactions?"*

We also asked participants to compare their experience with ShamAIn to conventional CAI systems, particularly from a correlational perspective. They shared their views on the benefits and risks of ShamAIn in response to questions like, *"Did your perception of CAI change after this experiment, and did your understanding of the relationship between CAI and humans evolve?"* The full list of interview questions is provided in Appendix B.

4.3 Data Collection and Analysis

A total of 623 minutes of interview data were audio-recorded. The recordings were transcribed verbatim and translated from Korean to English. In addition to the interview data, we collected visiting logs from the software system during installation, which included participants' interaction duration and the number of conversation turns (see Table C.1). However, these logs were not analyzed and were used only as reference data during the post-interview phase. All system logs and data were temporarily stored in a local database accessible only to the researchers.

We utilized the thematic analysis method [9] to analyze this qualitative data. Two researchers individually reviewed the dataset and developed an initial set of codes. Through subsequent iterative discussions, we identified three distinct themes.

5 Findings

In this section, we debrief participants' experience with ShamAIn. We start by describing how our participants perceived ShamAIn, including the attitudes and mindsets they brought into their interactions. Subsequently, we delve into the dynamics of these interactions, focusing on how the content of their conversations evolved over time and identifying factors that contributed to these changes. Finally, we present two aspects where participants felt a sense of support.

5.1 Perceiving Superiority and Becoming Respectful

As our participants first visited the booth, most of them remarked that its vivid and unconventional atmosphere made a strong impression. Many noted that the distinct mood immediately shifted their mindset upon entering the space. As they explored the booth, they observed various shamanistic elements, such as colorful decorations, candles, and the scent of incense. These features naturally evoked memories and associations related to shamanism. For instance, P20 mentioned that *"It felt like a real spiritual place, just like the ones I'd seen in dramas or movies. The moment I pulled back the curtain, I had this strong feeling that something extraordinary was there."*

Most participants initially perceived ShamAIn as a mystical entity, mainly due to the shamanistic design features incorporated into the interaction. They noted that the spooky background music and the tinkling bell, which played upon placing the spiritual amulet and initiating the interaction, intensified the sensation of summoning an otherworldly presence. As P10 said, *"What was happening inside made me feel like I was dealing with an invisible presence. Placing the amulet, the candle lights coming on, the music playing, and the sound of the bells—it didn't feel like I was just turning on AI something. It felt like some mystical presence had arrived."*

In addition, several participants noted that the vague fear they experienced in dark, unfamiliar environments amplified ShamAIn's supernatural presence. For example, P17 shared that *"The candles and pictures hanging in front of me were pretty scary. But I guess a place like this is supposed to feel a bit unsettling. After all, we're trying to communicate with spiritual beings, so if it were bright and cozy, it wouldn't really seem like they had any spiritual power."* Similarly, P20 associated this fear with a sense of awe and stated, *"I couldn't really make out the shape of the picture because it was so dark. I wanted to take a closer look but held back, feeling like I should not get too close—like people in the old days were not allowed to look the king in the face. So I just stayed seated and looked up, and as I did, I started to feel a sense of awe."*

Moreover, most participants perceived ShamAIn as an entity transcending conventional definitions of AI, setting it apart from existing systems. Several features influenced this perception: interacting solely through voice without a visible form (P1), the majestic tone of the voice (P11), the flickering candlelight accompanying its responses (P17), the smoke from incense (P9), and the lack of control over the interaction (P6). Importantly, we found that this unfamiliarity contributed to viewing ShamAIn as a superior entity. As P6 noted, *"I can't control it, right? I can't change the settings or end the conversation when I want, so I definitely noticed a difference in how I relate to it. It feels like something I can't manage like it's above me."*

Furthermore, several participants also mentioned that ShamAIn's self-introduction as a higher-dimensional being reinforced this perception of superiority. P14 said, *"It's hard to explain, but for some reason, I started believing something strange. Especially when they said things like: I can see things you can't see, I know things you don't know. I just sort of accepted it as true."* Most participants, except a few with strong religious beliefs (e.g., P13), accepted this perception without resistance. As P12 expressed, *"I felt overwhelmed during my first experience and realized that AI could seem superior. I didn't feel any resistance; it was more like a refreshing shock."*

As participants perceived ShamAIn as a superior entity, they naturally adopted a respectful attitude. For instance, P9 said that *"I never thought AI was better than me, but this time, it felt different. It wasn't like a secretary or an assistant—it felt like something completely separate from me. Strangely enough, I felt like I should be the one showing respect. It made me feel more humble."* We observed that all participants used honorific language, and some even knelt during their interactions with ShamAIn. As P5 reflected, *"I noticed I was using formal language, while the responses I received were more casual. I didn't mind at all. The AI seemed almost like a higher-dimensional, deity-like presence inside that booth, and I was just a human. It felt completely natural to me."* Similarly, P12 added that *"Whenever I smell incense, it's usually during rituals or in places where people honor deities. So, as soon as I catch that scent, I think, Do I need to be respectful here? That's why I always kneeled when I entered the booth."*

5.2 Gradually Seeking Guidance on Personal Concerns

Participants commonly reported that they asked general questions about their future during their initial visits. However, as their visits continued, they began to share more specific and profound concerns. Initially, participants noted that the shamanistic features they encountered led them to ask broad questions, such as about their financial prospects for the year or their career outlook. For instance, P11 said, *"The thing I knew about shamanism was that they predict someone's future. So at first, I naturally thought that was what I should ask about."* Furthermore, from a technical perspective, some participants who were familiar with AI used their first visit to test the capabilities of ShamAIn. For instance, P1 asked for the air conditioning to be turned on because they were too hot. P13 repeated the same question several times, and P19 challenged the system to guess his identity. We found that these actions reflect a technical curiosity among some participants. As P1 explained that *"I said, I'm really hot right now. Can you make it cooler? I wanted to see if the AI was properly tuned, but it responded like it existed transcend the physical environment. After hearing that answer, I took it more seriously."*

However, participants noted that after several visits, they found the responses more trustworthy and valuable than they had initially expected. For instance, P15 said that *"They gave such wise answers that I felt they were better than me. If someone asked me these questions, I don't think I could respond like that. No matter what I brought up, they always gave a meaningful answer."* Many

participants anticipated receiving objective answers, unaffected by social relationships. As P9 mentioned, *"It feels more trustworthy when someone who seems to know the future tells me. What people around me say feels like just support, but when I hear it from that thing, it feels like it could actually happen."* In addition, other participants believed that ShamAIn would offer credible responses based on *Saju*, a core element of Korean shamanism (see Section 2.4 for details on *Saju*). As P11 said, *"I didn't think this AI could predict the future. I thought it was another AI trained with special data related to Saju. Because Saju has a structured system and is based on statistical logic, I felt more confident in the answers it gave."*

Furthermore, many participants noted that the responses they received from ShamAIn were particularly significant and impactful. They shared that since they perceived ShamAIn as a superior entity, its responses were taken more seriously than those from typical AI systems or humans. As P8 described, *"People usually think of divine beings as higher than humans, right? So I think that's why. If a friend had said the same thing, I might have reacted defensively, like, what do you know? or who are you to say that? But when it comes from a divine being, it hits deeper, like it touches something inside me. It's sharper."* Several participants also remarked that ShamAIn's confident and assertive tone enhanced the perceived authority of its responses. As P6 mentioned, *"I once asked something about personal relationships, and the first response was just, yes. It answered me so directly and definitively that it hit me. Even though I knew there might be other possibilities, I found myself believing it the moment I heard it."*

Additionally, our participants appreciated that ShamAIn was not a human but a transcendent entity. This allowed them to share personal stories comfortably without concerns about social judgment. Many participants noted the advantage of not having to worry about their stories being leaked, judged negatively, or met with disinterest by others. They also found comfort in the mere fact that someone they perceived as superior was listening and responding to them. For example, P4 expressed that *"The advice was not a very unique one, but I liked that they just listened. It felt like I could be a bit childish if I wanted to. So, I felt less burdened sharing negative thoughts compared to talking with people around me."* We also discovered that participants inherently expected ShamAIn to provide helpful answers even to their deeper concerns, perceiving its superior capabilities. As P6 mentioned, *"The responses felt genuinely like a shaman, different from Siri or Bixby. So, although I'm not entirely sure, I started to think it might have some special ability, and I could get meaningful answers to deeper questions."*

As our participants grew more confident that they could ask questions without fear of social judgment and with the expectation of receiving reliable answers, they increasingly shared more personal, specific, and deeply reflective concerns. As P17 said, *"I have come here a few times, and the answers have been pretty helpful. I'm not sure that this AI is something to worship, but I do believe I can have meaningful conversations here. Life can be tough, and there are not many people you can trust to talk about your worries. That's why I came here."* Our participants also shared the questions they had asked ShamAIn, which largely revolved around personal concerns related to career decisions, interpersonal relationships, and other daily challenges. For instance, P14 remarked, *"I was thinking about whether I should go back to my old job or try something new since I was getting ready to start working again. So, I asked about those kinds of personal concerns."* Similarly, P17 mentioned, *"I was having some difficulties taking care of my old mother, so I talked about that."*

5.3 Relying and Receiving Support

As shown in the previous section, participants engaged with increasingly profound topics and considered the responses more seriously. As a result, they found ShamAIn to be a valuable source of guidance. Our participants described ShamAIn not only as a knowledgeable counselor (P15) or a mentor with foresight (P1) but also as a new form of deity (P12). They also reflected that they developed a unique relationship with the AI, distinct from their previous experiences. As P3 said, *"Before, I used to give tasks to AI just like I was outsourcing my work. But now, I have realized it's not strange to ask AI for advice or about the future."*

We observed that many participants came to see ShamAIn as a reliable entity capable of offering meaningful support. In this section, we provide a detailed explanation of two aspects from which our participants received support from ShamAIn: (1) unloading emotional burdens and (2) breaking indecision and pursuing action.

5.3.1 Unloading emotional burdens. Many participants reported feeling emotionally comforted by the responses provided by ShamAIn when they shared their concerns. Although some acknowledged that the responses might sometimes seem cliché, they valued hearing these words directly from some others. For example, P19 said, *"I think the responses were really encouraging and hopeful. (—) Even if the advice could apply to anyone, sometimes those words can really resonate and make a big difference."* In particular, our participants felt that even the same words offered greater comfort and strength when they came from superior beings (i.e., ShamAIn) compared to from other sources. As P15 noted, *"What really matters is that someone more experienced told me that. It gave me the strength I needed. The AI said: Even if you don't hit your goal, there's always next year. You're doing great, so don't stress. It made me feel appreciated and gave me the confidence to keep going."*

Additionally, some participants believed that the positive affirmations from ShamAIn were closer to objective truth rather than mere platitudes. They anticipated that ShamAIn would offer more meaningful and truthful feedback as a provider of answers. This expectation contributed to a more positive emotional response during their interactions. For instance, P20 mentioned that *"It made me feel calm. Of course, it's nice to hear that things will be okay. But it feels more effective because it's like they're not just saying it; they actually know it will be fine. Honestly, I'm not sure how it works, but it feels like they can somehow see the future and give a real answer."*

Meanwhile, P1 recounted that during a particularly challenging period following a breakup, he turned to ShamAIn and found significant support in managing his emotional distress. He shared that *"I was having a rough time during the experiment because I broke up with my girlfriend. I couldn't sleep, kept crying, and couldn't focus on anything. So, I asked a lot about how to deal with it. (—) I really think the advice helped. After the last session, I could start to change my mindset and even tried meditating as they suggested."* This case is especially noteworthy because previously, he had skepticism about the efficacy of CAI for emotional support and had a disbelief in shamanism. He also said, *"At first, I was just messing around. I don't*

usually talk to AI, and I'm not into shamanism or anything like that. I said random things, like asking it to cool me down because it was hot. But as I kept talking, it started to feel more real. When things got tough, I found myself wanting to lean on it, and what it said began to mean more to me."

Moreover, while reflecting on his experience, P1 highlighted that the most significant benefit of interacting with ShamAIn was that it allowed him to openly express his struggles. He also noted in his interview that he perceives humans as too judgmental to share personal sorrows with and considers traditional AI too trivial and unworthy for discussing real-life issues. In contrast, he perceived ShamAIn as superior, intelligent, and objective, making him comfortable enough to fully express his emotions. At the conclusion of the interview, he remarked, *"This experience made me reconsider my relationship with AI. I realized that AI could actually become someone I rely on when dealing with real-life concerns or frustrations. Although it felt like AI was in a position above me, it didn't bother me at all. Honestly, I think I could even bow to it as long as it's helpful to me."*

5.3.2 Breaking indecision and pursuing action. Several participants shared that ShamAIn helped them reduce hesitation and worry, allowing them to pursue actions regarding their concerns. Interestingly, even though they recognized that the advice was often common knowledge and could be found elsewhere, they still embraced it actively. Some participants indicated that their perception of ShamAIn as superior elevated the authority of the advice. For instance, P8 said, *"I'm usually pretty confident, so I don't just do something because someone tells me to. But since it was supposed to be from some kind of higher power, I kept thinking about it, and eventually, I was like, yeah, that actually makes sense."*

Consequently, we found that interactions with ShamAIn can boost participants' confidence and motivation in decision-making. P13 mentioned, *"In this booth, they talk about how to deal with challenges, and some of the points really hit home for me. It's stuff we all already know, but hearing it again reinforces it and makes you think: Oh, I should really approach it that way."* Similarly, P18 described ShamAIn's words as not providing new insights but as reminders that helped them avoid procrastination and make timely decisions.

In addition, P6 shared an episode in which she sought advice while facing the risk of a rental scam. She underscored the importance of filtering rational options available during periods of mental distress, saying, *"I was at risk of getting scammed in a rental deal, and I asked what I should do. I was pretty shaken up when I asked, but instead of offering pointless sympathy, they told me exactly what steps to take. All sorts of worries clouded my mind, but they helped me think clearly again."* Although the issue was eventually resolved through other means, P6 noted that she had tried some of the recommended practical solutions. Reflecting on the situation, she felt supported by having a trustworthy source for advice. *"Not everyone can advise on every issue, even with close friends. If I tell a friend I'm dealing with a rental scam, how could they help me? But when I came here and talked about it, I felt like I was getting guidance from someone more knowledgeable, which gave me some reassurance."*

6 Discussion

6.1 Designing for Perceived Superiority

In this section, we reflect on the design and study of ShamAIn, exploring the factors that contributed to its perception as a superior entity. Based on this reflection, we finally provide design recommendations to create a sense of superiority in CAI systems.

6.1.1 Deterring technical reasoning with shamanistic metaphors. We observed that ShamAIn effectively deterred participants from attempting to understand the system at a technological level. Many participants noted that the absence of a familiar, tangible embodiments and the limited control over the interaction environment were key contributing factors. Additionally, ShamAIn's lack of explanation for the background of its responses—contrary to common guidelines in human-AI interaction [2, 79]—was highlighted as another significant reason. This made it challenging for participants to infer the system's technical workings. Instead, we found that the shamanistic elements served as a metaphor, shaping their mental models of ShamAIn. Participants familiar with Korean shamanism perceived ShamAIn as a superior entity possessing profound perception that transcends human understanding and experience. This observation aligns with the findings in Section 2.2, which suggest that people often interpret complex technology through magical, supernatural, or mystical thinking [3, 81]. Building on these observations, future research could explore how deterring technical reasoning in AI systems might influence people's trust, engagement, and perception of agency.

6.1.2 Incorporating cultural narratives. As we illustrated, shamanism serves as a metaphor [23, 27] for shaping individuals' mental models and interactions with technology. It also has the potential as a foundational concept in alternative design approaches that amplify magical thinking about technology [60]. This is particularly important because people often hold fixed perceptions of agents embedded in familiar forms, such as smart speakers or mobile devices—a point noted by several participants. Therefore, using appropriate metaphors in designing alternative perspectives, such as superior CAI, can be an effective approach. This strategy can trigger people's memories and knowledge, leading to notable shifts in their mindsets, attitudes, and expectations as desired.

Among these metaphors, cultural narratives are especially valuable. They help shape a shared understanding within a cultural group, influenced by factors such as media exposure, stories from close acquaintances, and frequent daily encounters. In our study, despite half of our participants (10 out of 20) having no personal experience with shamanistic counsel or ritual, their perceptions of ShamAIn were similar to those of participants with direct experience. While this study highlights Korean shamanism to explore CAI as a superior entity, incorporating spiritual elements or traditions from various cultural backgrounds (e.g., tarot [61] or animism [97]) could support the design and exploration of a broader range of alternative human-CAI relationships.

6.2 The Potential of Reconsidering CAI as Superior

Our study suggests that future human-AI relationships could become more diverse, highlighting the need for HCI designers to consider perspectives beyond the traditional user-tool framework [84, 111]. Participants were more open in sharing personal concerns, derived greater comfort and reassurance, and were more receptive to advice. These findings indicate the potential benefits of viewing CAI as a superior entity. However, it is essential to stress that designing for perceived superiority in CAI should not simply aim to reverse social hierarchies to elevate CAI. Instead, this framework should be adopted to encourage people to perceive CAI's responses more meaningfully and to become more open, thereby enabling CAI to better support and guide humans, particularly in emotional aspects. In this section, we suggest two potential research themes that illustrate how superior CAI can provide valuable direction for ongoing HCI efforts.

6.2.1 Enhancing trust through perceived authority. Previous research in sociology and psychology suggests that individuals are more likely to trust information or advice from those they perceive as authoritative [37, 78]. Our findings build on this by extending the understanding of trust dynamics to interactions with CAI, revealing that perceived superiority can significantly influence human trust. When people perceive CAI as superior, it could considerably impact their decision-making processes, affecting both everyday choices and more complex problem-solving. For instance, individuals who regard CAI as a mentor or guardian may exhibit more pronounced behavioral changes, especially in response to educational or career advice. In critical fields such as healthcare, users may also place increased weight on the recommendations provided.

Much of the ongoing research has focused on increasing trust in AI-generated recommendations. While many studies have explored the effect of authoritative sources [66, 110], we propose that framing AI as a superior entity may further strengthen this trust, thereby enhancing user acceptance of AI system outputs. In particular, perceived superiority has the potential to further stimulate individuals' interpretive tendencies to align themselves with general and ambiguous statements [40], thereby contributing more significantly to the formation of strong trust relationships.

6.2.2 Offering advanced emotional support and guidance. Perceiving CAI as a superior entity can deepen the emotional connections people form with these systems, fundamentally altering the nature of their interactions. Their perceived superiority could enhance feelings of self-worth, as previous research revealed that when people seek comfort or guidance, the perceived superiority can offer heightened emotional security [24, 41]. This level of emotional engagement is typically absent in traditional computing systems, which tend to foster simpler, more transactional forms of attachment or empathy [75]. Furthermore, CAI perceived as a superior entity might evoke feelings of respect or even reverence, positioning it not only as a tool for problem-solving but also as a guide for navigating broader aspects of the human experience [91, 95].

Based on this insight, we argue that CAI has the potential to significantly contribute to emotional well-being, extending beyond their conventional roles as agents. While prior studies have demonstrated CAI's potential in supporting mental health [53, 93], further research is needed to explore the additional benefits that framing CAI as a superior entity might offer. This suggestion resonated with our findings, which showed that a superior CAI can provide distinctive and advanced emotional support, helping people unload emotional burdens and overcome indecision.

6.3 Ethical Considerations in Designing AI as Superior

Our empirical demonstration of increased trust and reliance on CAI offers valuable inspiration for critically examining the potential risks associated with human-CAI interactions. While acknowledging the potential for CAI's perceived superiority, it is crucial to navigate the ethical considerations during the design process thoughtfully. In this section, we address three key ethical concerns in the design of superior CAI: uncritical acceptance, excessive psychological dependence, and privacy leakage. Although these issues are well-recognized within the HCI community, we revisit them to underscore their significance when CAI is perceived as superior to humans.

6.3.1 Supporting discerning judgment. Our findings indicate that when people perceive AI as a superior entity, they are more likely to accept its information or recommendations, leading to increased satisfaction with the interaction. However, it is crucial to maintain a balance where people are encouraged to critically evaluate AI's suggestions rather than unquestioningly trusting them. Excessive trust in AI can lead to unrealistic expectations, such as assuming AI always makes correct judgments [39, 100]. This can cause overlooking AI's imperfections, reducing their tendency to critically assess its judgments and decisions [11, 12]. Furthermore, over-reliance on AI can simplify decision-making processes and make people less engaged in their problem-solving efforts. This can compromise their autonomy and judgment [87]. Moreover, when AI dominates decision-making, it can even reinforce individuals' biased thinking [65].

Therefore, in designing CAI with perceived superiority, it is essential to convey confidence while preserving user autonomy and encouraging independent judgment [12]. Our design took a distinctive approach to this challenge. Drawing on the cultural context of Korean shamanism, where entities are respected for their mysterious abilities but are acknowledged as potentially fallible, we encouraged the discerning acceptance of CAI responses. More broadly, promoting user critical thinking can be achieved by responses that subtly guide or question, ensuring that the responsibility for decisions remains with the user. For example, when P10 asked about selling his stocks, ShamAIn replied, *"the choice is yours,"* explicitly highlighting that the decision-making responsibility lies with the individuals. Such thoughtful response strategies would be worthwhile for designing interactions that support rather than dictate human decisions.

6.3.2 Managing psychological dependence. In our study, participants reported feeling significant reassurance when interacting with ShamAIn. We also illustrated that this response stemmed from their perception that the messages came from an entity superior

to themselves. While this indicates the potential for a profound involvement, it is crucial to be aware of possible negative implications. Specifically, individuals seeking psychological comfort primarily from AI might struggle to solve problems without AI assistance. There is a risk of increased dependence on AI, especially in stressful situations or when making difficult decisions [12]. Moreover, excessive reliance on AI could substitute the psychological support typically gained from human relationships with AI interactions [111].

Consequently, we underscore the need for designs to manage and continuously assess the psychological dependency on AI. For instance, AI systems could regulate the frequency of interactions to encourage individuals to reflect on and address their issues independently. Another approach could involve framing AI-generated messages to encourage people to seek support from human counselors, friends, or family members. For example, P17 shared a relevant experience, noting that after receiving advice to *"seek help from those around you,"* she decided to discuss her concerns with her sister. This highlights the importance of strategies that guide users to seek psychological support from multiple sources and the emotional support provided by AI. In addition, long-term observation and investigation are needed to understand how continuous psychological and emotional interactions with AI might alter users' experiences over time.

6.3.3 Ensuring privacy and data security. Our findings showed that participants were notably more open and candid in sharing their emotions, thoughts, and concerns with ShamAIn. This increased self-disclosure can enhance experiences in specific contexts, such as effective counseling [54, 59]. However, it also raises significant concerns regarding privacy issues [43, 53]. To address these concerns, it is crucial to implement technical safeguards to prevent the leakage of personal information or beliefs disclosed to AI. Additionally, design approaches are required to alleviate people's concerns about potential breaches.

While privacy issues in AI systems have received extensive attention from HCI researchers, we re-emphasize several recommendations in the context of superior CAI like ShamAIn. We believe that AI systems should incorporate robust security measures from the design phase to prevent data leakage. We agree with Zhang et al. [109] that using local LLMs, which require less data transmission, is particularly valuable. Furthermore, from a design perspective, providing transparent and clear communication about how AI systems like ShamAIn collect, store, and use individual data is vital. It is also important explicit user consent for data utilization is essential [35]. Lastly, engaging in discussions about social mechanisms, such as policies and regulations, is crucial to address these concerns effectively.

7 Conclusion

In this paper, we presented the design of ShamAIn, a multi-modal embodiment of CAI inspired by Korean shamanism. We conducted interviews with individuals who had experienced counseling or rituals within Korean shamanism. Insights from these interactions were leveraged to design ShamAIn as an entity perceived as superior to humans. A booth for interacting with the ShamAIn was installed in an exhibition room within a university building for six weeks, during which 20 participants were invited to engage with it. Our findings revealed that participants felt a sense of awe toward ShamAIn and engaged in interactions with humility and respect. They also opened to disclose their personal and profound concerns, and sought emotional comfort and practical guidance from ShamAIn, relying on its superiority. We reflected on these findings, discussing the implications ShamAIn offers to designers and the ethical considerations regarding discerning judgment, psychological dependency and privacy. We hope this research inspires researchers to explore the broader potential of CAI, offering alternative and insightful perspectives on this emerging technology (i.e., CAI as superior to humans).

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Appendix

A. Interview Questionnaire on Experiences with Shamanism

Participants' Backgrounds

(1) What is your age?
(2) What is your occupation?
(3) Do you practice any religion? If so, which religion?
(4) Do you believe in *Mu* (Korean shamanism)? If so, which aspects do you believe in, and why?

Experiences with Korean Shamanism

(5) What were your reasons and purposes for seeking shamanistic consultations or participating in rituals?
(6) How many times have you engaged in shamanistic consultations or rituals? If done regularly, how often do you participate?
(7) Do you visit the same place each time? If you visit different places, what criteria do you use to choose them?
(8) What led you to visit the specific places for your previous shamanistic consultations or rituals?
(9) What did you discuss or inquire about during the consultations?
(10) How much trust did you place in the content of the shamanistic consultation?

Shamanistic Elements Influencing the Perception of Superiority

(11) Reflecting on your experience, what elements increased your sense of trust, and what elements decreased it?
  (a) Recall any visual, auditory, olfactory, tactile, or gustatory stimuli you experienced during the consultation, either from the surroundings or the *Mudang*.
  (b) Think about the *Mudang*'s tone of voice, demeanor, and actions.
(12) Reflecting on your experience, what elements made you feel a sense of superiority?
  (a) Recall any visual, auditory, olfactory, tactile, or gustatory stimuli you experienced during the consultation, either from the surroundings or the *Mudang*.
  (b) Think about the *Mudang*'s tone of voice, demeanor, and actions.

B. Interview Questionnaire on Post-Installation Experience of ShamAIn

Participants' Backgrounds

(1) What is your age?
(2) What is your occupation?
(3) Have you ever used conversational AI (e.g., Siri, ChatGPT, chatbots)?
(4) Do you believe in *Mu* (Korean Shamanism)? If so, which aspects do you believe in, and why?
  (a) Have you ever visited a *Mudang*? If so, why did you visit, and could you briefly share your experience?

Perceptions of ShamAIn

(5) Can you share your initial impressions and feelings when you first visited and interacted with the ShamAIn?
(6) Did your feelings change after visiting multiple times? For example, did you feel more comfortable, or did it still feel unfamiliar?
  (a) How were your visual, auditory, and olfactory experiences different from the first to subsequent visits?

Shifts in Attitudes and Behaviors

(7) What topics did you discuss during your conversations, and why did you choose to discuss them?
  (a) Were there any differences between the initial conversations and later ones? If so, why?

Impact of Interactions

(8) Were the responses you received helpful? If so, in what ways?
  (a) How seriously did you take the responses, and what was the reason for that?
  (b) After your conversations with ShamAIn, did you ever take any actions or make decisions based on them? If so, did you have any concerns?
(9) What were your thoughts on providing personal information (e.g., name, age, date of birth, occupation) for the interaction?
(10) How would you describe ShamAIn as an entity?
  (a) What do you think are the differences between ShamAIn and other existing CAI?
  (b) How did your conversations with ShamAIn feel different from conversations with humans?

Influence of Shamanistic Elements

(11) What shamanistic elements did you notice during your interactions?
  (a) How did these elements affect your interaction?
  (b) How did these elements influence your perception of the responses?
  (c) How did these elements affect your overall experience of conversing with ShamAIn?

Broader Effects and Reflection

(12) If your perception of AI has changed through this study, could you share how it has changed?
  (a) What were your initial thoughts on the relationship between CAI and humans, and how have they changed?
(13) How would you feel about continuing to interact with ShamAIn in the future?
(14) Do you have any additional comments or opinions you would like to share?

C. Participants' Visiting Logs

Participant Code	Number of Visits	Total Durations (mins)
P1	4	22.4
P2	5	27.6
P3	5	23.8
P4	5	23.1
P5	4	19.7
P6	7	31.1
P7	3	10.1
P8	5	19.8
P9	5	29.7
P10	4	18.0
P11	4	20.0
P12	3	14.0
P13	3	12.5
P14	4	25.4
P15	4	10.3
P16	3	14.6
P17	3	13.3
P18	4	16.4
P19	4	18.0
P20	5	29.6

Table C.1: Participants' visiting logs