

VISUALIZING SUNDANESE IDENTITY THROUGH ANGKLUNG- INSPIRED APP ICON UI DESIGN

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Abstract: Sundanese culture holds a wealth of traditional values and symbols, yet its representation in digital design particularly in application icons remains limited. This study introduces angklung-inspired application icons as a unique approach to visualize Sundanese culture within user interface (UI) design. Unlike previous culturally inspired UI works, this design emphasizes the adaptation of the angklung's distinctive bamboo structures into recognizable icons such as Home, Contact, Message, Settings, Files, Browser, Music, Camera, Phone, and Clock. Using a qualitative method, the process involved gathering visual references, producing manual sketches, and digitalizing the designs. The results demonstrate that these icons not only meet aesthetic and functional standards of modern UI but also provide concrete benefits: offering designers fresh inspiration for culturally grounded visuals, contributing to cultural preservation through digital media, and reinforcing Indonesia's identity in global digital platforms. This research highlights how UI design can effectively bridge tradition and innovation, positioning cultural heritage as an integral part of digital creativity.

Keywords: Angklung, icon design, mobile application, Sundanese culture, visual exploration

Abstrak: Budaya Sunda memiliki kekayaan nilai dan simbol tradisional, namun representasinya dalam desain digital—khususnya ikon aplikasi—masih terbatas. Penelitian ini menghadirkan ikon aplikasi bertema angklung sebagai pendekatan unik untuk memvisualisasikan budaya Sunda dalam desain antarmuka pengguna (UI). Berbeda dengan karya UI terinspirasi budaya sebelumnya, desain ini menekankan adaptasi struktur bambu khas angklung ke dalam ikon-ikon umum seperti Beranda, Kontak, Pesan, Pengaturan, File, Peramban, Musik, Kamera, Telepon, dan Jam. Dengan metode kualitatif, proses perancangan meliputi pengumpulan referensi visual, pembuatan sketsa manual, dan digitalisasi desain. Hasil penelitian menunjukkan bahwa ikon ini tidak hanya memenuhi standar estetika dan fungsional UI modern, tetapi juga memberikan manfaat nyata: menjadi inspirasi baru bagi praktisi desain dalam menghadirkan visual berbasis budaya, mendukung pelestarian budaya melalui media digital, serta memperkuat identitas Indonesia dalam platform digital global. Penelitian ini menegaskan bahwa desain UI dapat menjadi jembatan efektif antara tradisi dan inovasi, sekaligus menempatkan warisan budaya sebagai bagian penting dari kreativitas digital.

Kata kunci: *Angklung, aplikasi mobile, budaya Sunda, desain ikon, eksplorasi visual*

INTRODUCTION

The rapid advancement of digital technology has driven the emergence of various applications with user interfaces (UI) that are not only functional but also incorporate aesthetic and cultural values. For Indonesian society, especially the younger generation, maintaining a strong connection with cultural identity is crucial in this era of globalization. One way to achieve this is by integrating local cultural elements into digital products, such as designing application icons that reflect and respect traditional cultural values (Kurnia and Wirasari, 2025).

Sundanese culture is rich in artistic expressions, ranging from traditional cuisine like *karedok* and *nasi liwet*, to music such as *degung* and *kecapi*, dances, and traditional instruments like the *angklung*. The *angklung*, a bamboo instrument played collectively, represents values of harmony, unity, and cooperation. It has been internationally recognized as part of Indonesia's cultural identity when UNESCO inscribed it on the Representative List of the Intangible Cultural Heritage of Humanity in 2010. Despite this recognition, the presence of *angklung* and other local traditions is gradually declining, overshadowed by the dominance of foreign cultural influences spread rapidly through digital media (Amalia, Mulyana and Amalia, 2025).

According to the Indonesian Heritage Conservation Network (JPPI), the *angklung* is considered a part of Indonesia's cultural identity. On November 16, 2010, through a UNESCO Convention held in Nairobi, Kenya, the *angklung* was officially recognized as an Intangible Cultural Heritage of Humanity. This acknowledgment placed the *angklung* on the "Representative List of the Intangible Cultural Heritage of Humanity," joining other Indonesian cultural

heritages such as *wayang* (shadow puppetry), *keris* (ceremonial dagger), and *batik* (traditional textile) (Faturahman, Apriani and Husen, 2025).

Therefore, the purpose of this research is to design *angklung*-inspired application icons as a medium to visualize Sundanese culture in UI design. This study contributes by offering fresh inspiration for design practitioners, supporting cultural preservation through digital media, and reinforcing Indonesia's cultural identity in global digital platforms. It also demonstrates how UI design can act as a bridge between tradition and innovation, ensuring that cultural heritage remains relevant in the digital age (Devy *et al.*, 2025).

Considering that people today are rarely separated from gadgets and smartphones, *angklung*-themed icons provide not only aesthetic and functional value but also serve as educational tools in a cultural context. By adapting the symbolic and visual elements of the *angklung* into application icons, this study seeks to enrich the repertoire of local UI design while strengthening the presence of Sundanese culture in the global digital ecosystem (Hasanudin and Adityawan, 2020).

METHODS

This study employed a descriptive qualitative approach with visual study techniques (Hasan *et al.*, 2025). This approach was chosen because the primary focus lies in exploring the cultural values and visual representation of the *angklung* in the context of application icon design. Qualitative methods allowed the researcher to interpret cultural symbols of Sundanese heritage in depth and transform them into meaningful digital representations (Yudiawati, 2021).

The sampling process was carried out purposively, focusing on visual materials and references that directly represented the *angklung* and its cultural symbolism. A total of 15 visual references were examined, including photographs of *angklung* performances, Sundanese ornamental patterns, and contemporary

cultural design adaptations. In addition, 10 application icons were designed as samples: Home, Contact, Message, Settings, Files, Browser, Music, Camera, Phone, and Clock. The selection of these icons was based on their universality and frequency of use in mobile applications, ensuring both cultural and functional relevance. Literature review supported the process by covering sources related to *angklung* history, Sundanese cultural values, and foundational UI design theories.

Visual observation was conducted over a three-month period (January–March 2025) to document *angklung* forms, textures, and symbolic attributes across different media. The data were then analyzed using descriptive analysis with a visual semiotic approach, focusing on how the vertical and horizontal bamboo structures could be adapted into simplified yet communicative digital symbols. The analysis emphasized clarity, recognizability, and cultural meaning within the iconography.

This study specifically focused on mobile application icons and did not extend to other UI components such as typography, layout, or interaction design. The emphasis was placed on visual representation rather than interactivity or usability testing. In terms of geographical and demographic scope, the icons were designed primarily to represent Sundanese cultural values, but the target audience was extended to Indonesian users in general and potentially global users, to demonstrate how local culture can be embedded in universally understood digital symbols. By clarifying the sampling strategy, data collection methods, and study boundaries, the research provides a replicable framework for integrating cultural heritage into UI design through systematic visual exploration.

RESULTS AND DISCUSSION

The first step in the design exploration process involved collecting visual references, one of which is shown in Figure 1. This reference serves as an example of the *angklung*'s structure, which consists of three main bamboo tubes—two of

which are movable resonating tubes that produce sound. The primary components of the *angklung* that became the subject of the simplification process for digital icon design are highlighted in red in the image on the right. This visual emphasis helps identify the key elements that must be retained to preserve the *angklung*'s identity.



Figure 1. Visual reference

Several challenges emerged during this stage, such as maintaining a balance between cultural representation and the minimalist demands of digital design. Therefore, each icon was visually tested using a grid layout to assess the overall consistency and legibility of the design. This visual reference then served as the foundation for creating a series of manual sketches. Various user interface (UI) icon variations adapted to the *angklung* theme can be seen in these sketches (see Figure 2). In addition to the *angklung* icon, the sketches also attempt to merge the *angklung* form with icons for commonly used application functions such as "Menu," "Contacts," "Phone," "Messages," and others. This method aims to thoroughly and consistently integrate regional cultural elements into user interface design.



Figure 2. Icon sketch

After selecting the most appropriate design, the chosen sketch proceeded to the digitization stage using Adobe Illustrator. This process involved simplifying lines, selecting a color palette inspired by bamboo tones (wood brown, beige, and bright yellow), and adjusting shapes to ensure responsiveness and clarity across various display sizes. The final result is shown in Figure 3, where the application icons have been redesigned in a flat design style, while retaining the vertical bamboo elements as a symbol of the *angklung*. Ranging from icons that closely resemble the original *angklung* to those transformed into more abstract digital symbols, each box in the sketch presents variations and explorations of form. As essential visual features, distinctive elements such as bamboo tubes and horizontal frames have been preserved. The final forms were selected from the exploration outcomes and refined in their digital version using flat design aesthetics.

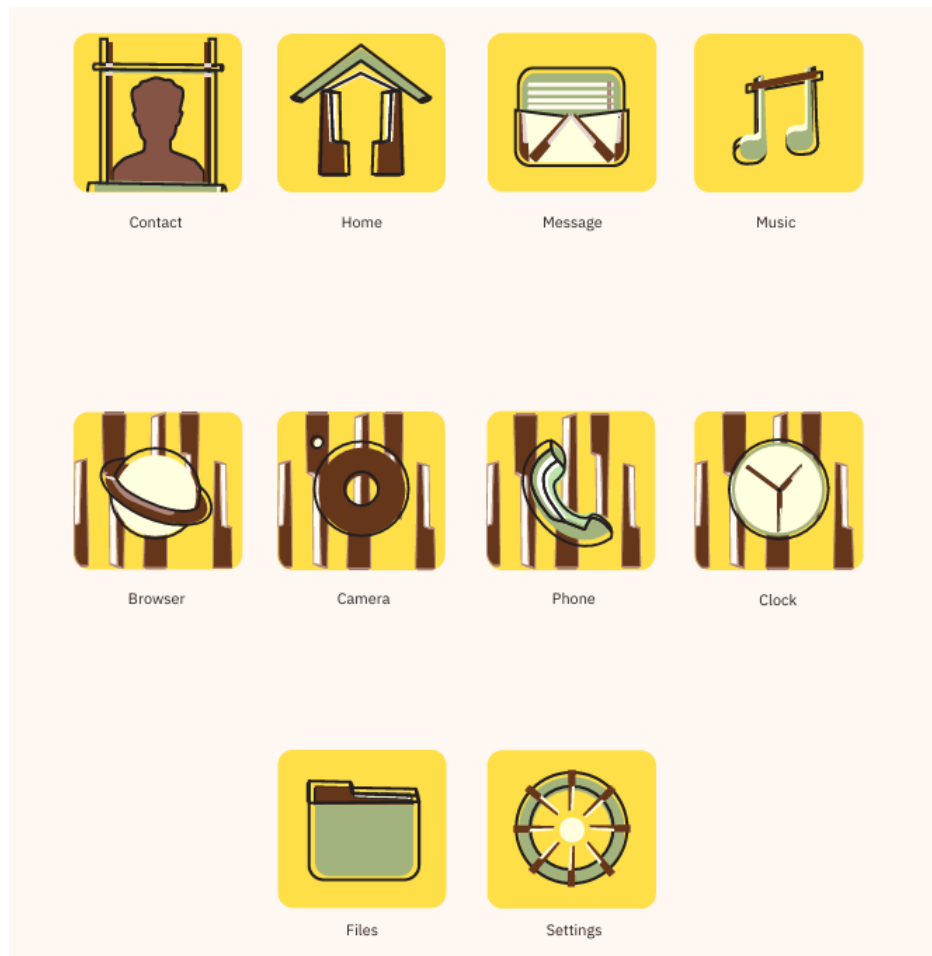
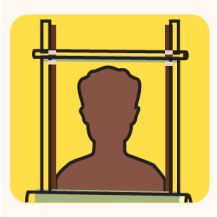


Figure 3. Final Icon Designs

Table 1 below is a breakdown of the final icon designs and the placement of *angklung* elements within them:

Table 1. Description of Visual Icon			
Icon Name	Final Visual	Element Location Angklung	Description
Contact		Two vertical bamboo tubes and a horizontal bar as the frame.	A head silhouette is placed within the angklung frame, reinforcing local cultural identity.
Home		Two bamboo sticks on the left and right, with a horizontal line forming a roof.	The house is depicted within bamboo structure, implying the meaning of a traditional Sundanese home.
Message		Bamboo slats in the back-ground with an envelope positioned in between.	The envelope is arranged as hanging from The angklung frame.
Music		Two vertical and horizontal lines frame the musical note.	The musical note is placed within The angklung structure to emphasize the context of traditional music.
Browser		A background with vertical bamboo lines.	The globe symbol appears as if it is hanging between the bamboo poles.

Camera		Bamboo slats as the background.	The camera remains dominant but is framed with bamboo texture.
Phone		Vertical bamboo structure in the background.	The telephone handset is integrated into the angklung frame.
Clock		Vertical bamboo slats as the clock background.	The clock is placed within the bamboo structure, symbolizing the harmony of time and culture.
Files		Bamboo frame on the file's side.	The file is positioned as if being held between bamboo stalks.
Settings		Bamboo slats form a gear wheel.	The gear icon is encircled by an angklung bamboo pattern to unify function and culture.

In addition to effectively meeting aesthetic requirements, the angklung-themed application icon designs developed in this study also serve as a digital representation of Sundanese cultural values. These icons skillfully blend

contemporary design aspects with classic visual components. Each icon possesses a unique identity due to the *angklung*-based visual approach, allowing users to quickly recognize them as representations of common application functions. This demonstrates how functional and visual meaning can successfully coexist.

The icon design adheres to fundamental principles of user interface (UI) design, including functionality, stylistic consistency, and shape clarity, with a strong emphasis on usability. The design remains legible even while incorporating cultural elements. To avoid diminishing the core message of each icon, *angklung* elements are used proportionally. This ensures that the icons continue to function effectively when applied in digital applications. Moreover, the iterative process, which began with visual references, hand-drawn sketches, and digitalization, provided numerous opportunities to experiment with the forms and symbols of the *angklung*. By interpreting the structure of the *angklung* and the shape of bamboo, the researchers successfully created imaginative yet recognizable visual variations. This demonstrates how traditional cultural components can be adaptively utilized in contemporary design without losing their original meaning (Wijaya, 2021).

The design results demonstrate that Sundanese cultural elements, particularly the *angklung*, can be successfully adapted into modern application icons. A total of ten icons were developed Home, Contact, Message, Settings, Files, Browser, Music, Camera, Phone, and Clock each integrating distinctive visual components of the *angklung*. The following findings are presented systematically based on three key aspects: functionality, aesthetics, and cultural symbolism.

1. Functionality

The icons were designed to maintain clarity and usability, in line with fundamental UI principles. Each design was tested using a grid system to ensure consistency, proportional balance, and legibility across different display sizes. For instance, the “Contact” icon retained the recognizable silhouette of

a person while embedding vertical bamboo tubes, making it easy for users to identify its function. This shows that the integration of cultural motifs did not compromise usability.

2. Aesthetics

The icons employed a flat design style, simplified lines, and a bamboo-inspired color palette (wood brown, beige, and yellow) to align with contemporary digital standards. The use of minimalist aesthetics ensures compatibility with modern interfaces while retaining distinctiveness. As seen in Figure 3, variations of icon prototypes ranged from near-realistic angklung depictions to more abstract bamboo-inspired patterns. This iterative process highlights the adaptability of traditional elements to contemporary visual styles without losing visual harmony.

3. Cultural Symbolism

Beyond functionality and aesthetics, the icons convey Sundanese cultural identity. Elements such as vertical bamboo slats, horizontal bars, and angklung frames were preserved as core motifs (Table 1). For example, the “Message” icon positions an envelope as if hanging within an angklung frame, symbolizing communication rooted in harmony. Similarly, the “Clock” icon embeds the passage of time within bamboo structures, metaphorically linking tradition and modernity. Such symbolic adaptations reinforce the angklung’s values of cooperation and unity.

Figure 3 illustrates how each icon variation balances authenticity and practicality. Icons that closely resemble the original angklung emphasize cultural fidelity but risk visual overload, while abstracted versions prioritize usability. The final icons selected for digitization achieve a middle ground: recognizable enough to evoke cultural meaning while maintaining clarity in digital contexts (Cenadi, 2020).

Earlier works on culturally inspired UI (e.g., Halimah et al., 2025; Ristian et al., 2025) primarily emphasized decorative integration of cultural motifs. In contrast, this study demonstrates a deeper transformation of a specific instrument, the *angklung*, into functional icons. This approach expands beyond aesthetics by embedding cultural values into commonly used digital symbols. The novelty lies in translating the *angklung's* structural essence, not merely ornamental patterns, into digital usability (Halimah et al., 2025).

For practitioners, the designs provide fresh inspiration for culturally grounded UI development. From an educational perspective, icons visualizing the *angklung* act as subtle tools of cultural transmission, especially for younger digital-native users. This echoes Irfan (2023), who emphasized that UI can serve not only functional but also cultural purposes. Despite the promising results, the study faces limitations. Cultural symbols may risk oversimplification or misinterpretation when adapted into minimalistic digital icons (Kamarulzaman et al., 2020). Additionally, this research focuses solely on visual aspects of mobile application icons, excluding other UI components such as interactivity or layout. Future studies could expand into usability testing with diverse user groups to validate effectiveness across demographics (Olivia, 2009).

Overall, the results confirm that *angklung*-themed icons can effectively integrate functionality, aesthetics, and cultural symbolism (Hidayat et al., 2025). They stand as proof that digital interfaces can bridge tradition and innovation, positioning Sundanese culture within the broader global digital ecosystem (Kholik et al., 2024).

From an educational perspective, the design also holds great potential for introducing local culture to application users, especially younger generations who are familiar with the digital world (Ristian et al., 2025). Icons that visualize the *angklung* can serve as indirect yet effective media for conveying cultural values. As such, the design functions not only as an aesthetic and practical element

within the UI, but also as a tool for preserving Sundanese culture through a contemporary visual format (Hou and Chun-Heng, 2013). Overall, the final outcome of this study shows that application icon designs inspired by the *angklung* can create a visual identity that is unique, meaningful, and relevant to modern user needs. The design stands as proof that local wisdom can be elevated and developed into part of an adaptive and communicative visual solution in the digital age (Radja and Sunjaya, 2024).

CONCLUSION

This study aimed to design angklung-inspired application icons as a medium to visually represent Sundanese culture within user interface (UI) design. The findings show that the resulting icons successfully integrate cultural symbolism with modern principles of functionality and aesthetics. The angklung, traditionally a musical instrument symbolizing harmony and cooperation, was reinterpreted into ten widely used application icons. In doing so, this research demonstrates that cultural heritage can be transformed into recognizable, functional, and meaningful digital symbols.

The novelty of this study lies in moving beyond decorative integration of cultural motifs, as seen in previous works on culturally inspired UI, toward the systematic transformation of a specific traditional instrument into functional icons. This approach highlights how cultural identity can be embedded not only as an ornamental feature but also as a core element of digital interaction design.

The implications of this research extend to both cultural preservation and design practice. For cultural studies, it illustrates how digital media can serve as a bridge between tradition and innovation, thereby strengthening the visibility of local heritage within global digital ecosystems. For design practice, it provides a framework for integrating cultural symbols into UI/UX, potentially influencing future trends toward more inclusive and culturally grounded digital interfaces.

Nevertheless, this study has several limitations. It focuses exclusively on visual aspects of icon design without usability testing or evaluation of user perception. Cultural symbols may also risk oversimplification or misinterpretation, especially among non-Sundanese audiences unfamiliar with the *angklung*. Furthermore, the scope was limited to mobile application icons, excluding other UI components such as interaction design, typography, or layout.

Future research could address these limitations by conducting user acceptance studies to evaluate the usability and cultural resonance of the icons, extending the approach to different digital platforms, or exploring other cultural symbols as inspiration for UI/UX design. By doing so, the integration of local identity into digital products can be expanded, ensuring that cultural heritage remains relevant and meaningful in the rapidly evolving digital age (Rahmasari, 2025).

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