

AI, ICT, and the Future of Gospel Music: Innovation, Worship, and Community

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Abstract: The rapid advancement of Artificial Intelligence (AI) and Information and Communication Technology (ICT) is reshaping multiple dimensions of human life, including religious expression and musical practices. This study examines the transformative impact of AI and ICT on gospel music, focusing on their roles in music creation, production, dissemination, worship, and community formation. Drawing on interdisciplinary literature from digital religion, music technology, and theological studies, the paper develops a conceptual framework that positions AI and ICT as enablers of innovation within gospel music ecosystems. The study reveals that AI-driven tools—such as algorithmic composition systems, machine learning models, and automated production software—are expanding creative possibilities for gospel artists, while ICT platforms, including streaming services and social media, are democratizing access and enabling global dissemination. These technologies foster personalized worship experiences, enhance audience engagement, and facilitate the emergence of transnational faith communities. However, the findings also highlight critical challenges, including concerns about theological authenticity, the erosion of human creativity, intellectual property complexities, and the persistence of the digital divide, particularly in developing contexts. By situating gospel music within the broader discourse of digital transformation and religious practice, this study underscores the need for a balanced and ethically informed approach to technological adoption. It argues that while AI and ICT offer significant opportunities for innovation, they must be integrated in ways that preserve the spiritual

essence, communal nature, and theological integrity of gospel music. The paper contributes to scholarship on digital religion and music studies by providing a focused analysis of gospel music as a dynamic site where faith, technology, and culture intersect, and offers practical insights for musicians, church leaders, and faith communities navigating the future of worship in a digital age.

Keywords: Artificial Intelligence, ICT, Gospel Music, Digital Religion, Worship, Music Technology, Christian Community

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1.0 Introduction

Gospel music has historically served as both a form of worship and a medium for spiritual communication within Christian communities. Originating from the fusion of African American spirituals, hymns, and revivalist traditions, gospel music has been a central pillar of faith expression, providing hope, encouragement, and a sense of communal belonging (Maultsby, 2015). Over time, gospel music has evolved in response to technological innovations—ranging from the use of the printing press for hymnals in the 19th century, the rise of radio and phonograph recordings in the early 20th century, to the television broadcasts of church services in the mid-20th century (Boyer, 2021). These historical shifts demonstrate that gospel music has never been static but has continually adapted to new media environments to sustain its spiritual and cultural relevance.

In the 21st century, Artificial Intelligence (AI) and Information and Communication Technology (ICT) are catalyzing a new phase of transformation in religious life, particularly in music and worship practices. The ongoing digital revolution now touches virtually every aspect of human activity, prompting religious institutions to reassess long-standing approaches to ministry and engagement (Rankin, 2024). As a result, many churches are adopting digital platforms and technologies, leading to the emergence of the “digital church,” in which worship, fellowship, and evangelism are increasingly conducted through online and technologically mediated spaces. This shift not only disrupts traditional theological understandings of community, presence, and authenticity but also creates new avenues for ministry and artistic creativity.

Within this digital environment, gospel music is experiencing profound change. AI-based technologies such as generative music systems, machine learning algorithms, and digital audio workstations (DAWs) are reshaping how music is composed, arranged, and produced (Drott, 2021). These tools facilitate automated harmonization, lyric generation, and sound enhancement, thereby broadening the creative landscape for gospel musicians. In parallel, ICT platforms—including streaming services, social media networks, and virtual worship spaces—have significantly extended the global reach of gospel music, enabling it to cross cultural and geographical boundaries with ease (Collins, 2020). This development allows gospel artists to distribute their works directly to global audiences without traditional intermediaries, contributing to a more inclusive and participatory music ecosystem (Miller, 2019).

Recent academic discussions suggest that the intersection of AI, religion, and culture presents both opportunities and complexities. For example, Afunugo and Molokwu (2024) argue that AI can enhance evangelism in the

Nigerian church by expanding outreach, enabling personalized communication, and supporting culturally responsive messaging. Nevertheless, they caution that excessive dependence on AI may weaken essential human interaction, cultural depth, and authenticity in religious practice. In a similar vein, Oyebanji et al. (2025) note that AI-driven technologies are reshaping how young Christians engage with spirituality, offering new pathways for connection and growth while also introducing risks such as misinformation, digital fatigue, and the weakening of traditional spiritual authority.

In the field of music and religious studies, Isichei (2023) provides an extensive review of AI’s impact on computational musicology and religious scholarship. The study underscores AI’s capabilities in pattern recognition, cross-cultural analysis, and predictive modeling, all of which are useful for musical composition and analysis. However, it also highlights AI’s limitations in capturing the emotional, subjective, and spiritual dimensions of religious music—qualities that are central to gospel music as an expression of worship. This tension between technological efficiency and spiritual authenticity is further demonstrated by Simmerlein (2025), whose investigation of an AI-led church service revealed mixed responses, ranging from spiritual engagement to concerns about diminished human connection, emotional resonance, and theological depth.

Beyond religious contexts, broader research such as that of Ukeje et al. (2024) emphasizes that AI can transform institutional and cultural systems effectively when implemented through inclusive, participatory, and stakeholder-driven approaches. This insight is particularly relevant to gospel music, where collaboration among musicians, clergy, technologists, and congregations is essential for ethical and meaningful technological integration.



Despite the growing body of literature, there remains a limited focus on the specific ways AI and ICT are reshaping gospel music as a unique form of religious and cultural expression. While studies have explored digital religion (Campbell & Tsuria, 2021), AI in music production (Sturm et al., 2019; Savage, 2022), and the historical evolution of gospel music (Maultsby, 2015; Boyer, 2021), little attention has been given to the intersection of these domains. In particular, the practical implications of AI and ICT for gospel music composition, production, distribution, and audience engagement—especially within African and Nigerian contexts—remain insufficiently examined.

This gap is important because gospel music extends beyond artistic expression; it is a theological and communal practice that shapes worship, identity, and evangelism. The growing integration of AI and ICT raises critical questions about creativity, authenticity, spirituality, and human agency in worship settings. Without focused investigation, there is a risk that churches and gospel musicians may either fail to fully harness these technologies or adopt them without critical reflection, thereby potentially weakening the spiritual depth of their practice.

Against this background, this study seeks to examine the role of Artificial Intelligence and Information and Communication Technology in the evolution of gospel music, with particular emphasis on their influence on composition, production, distribution, and audience engagement. It aims to critically explore both the opportunities and challenges associated with these technologies, situating gospel music within the broader discourse of digital religion and technological innovation. This study is significant in several ways. First, it contributes to the growing field of digital religion by providing a gospel-specific perspective on the intersection of AI, ICT, and worship practices. Second, it offers practical

insights for gospel musicians, church leaders, and Christian communities seeking to integrate technological innovations into ministry in ways that are both effective and theologically sound. Third, it addresses ethical, cultural, and theological considerations surrounding the use of AI in religious music, emphasizing the need for responsible and context-sensitive adoption. Finally, the study expands scholarly discourse on music, faith, and technology by demonstrating how digital tools are not only reshaping artistic production but also redefining worship experiences, evangelistic strategies, and communal identity in an increasingly digital world.

2.0 The Conceptual Framework

The integration of technology into gospel music can be best understood through a multi-layered conceptual framework that situates Artificial Intelligence (AI) and Information and Communication Technology (ICT) as catalysts of transformation within the religious and musical domains. This framework is anchored on the recognition that gospel music is not only an artistic form but also a spiritual practice aimed at worship, evangelism, and communal identity building.

Fig. 1 illustrates the conceptual framework for the integration of Artificial Intelligence (AI) and Information and Communication Technology (ICT) in gospel music, showing the interconnections between technological enablers, creative processes, transformational outcomes, and the surrounding theological and ethical considerations.

2.1 Core Layer: Technology as an Enabler

At the foundation of the framework lies technology, specifically AI and ICT, which functions as an enabler of innovation. AI provides tools for music composition, arrangement, and sound engineering through algorithms capable of generating harmonies, lyrics, and instrumental accompaniments (Sturm et al., 2019). ICT, on the other hand,



serves as the infrastructure for digital distribution, social media engagement, and virtual worship environments (Campbell & Tsuria, 2021). Together, AI and ICT

democratize access to music production and dissemination, reducing barriers for independent gospel artists and ministries that may lack traditional studio resources

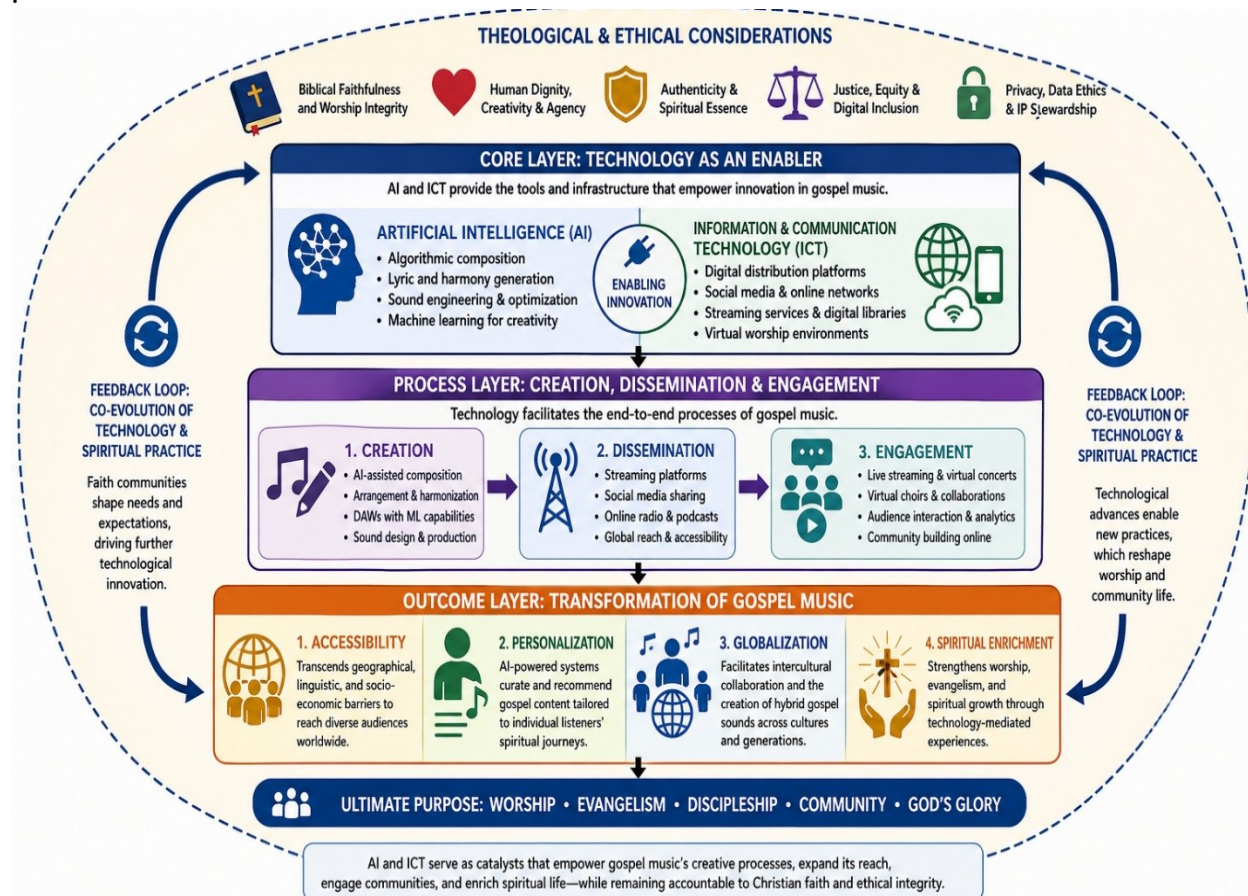


Fig. 1: Conceptual Framework for AI and ICT Integration in Gospel Music: From Creation to Community Engagement

2.2 Process Layer: Creation, Dissemination, and Engagement

The second layer of the framework emphasizes the processes facilitated by technology:

Creation: AI-driven platforms allow gospel musicians to co-create music with intelligent systems, experiment with new sounds, and optimize production quality. Digital Audio Workstations (DAWs) embedded with machine learning capabilities enhance

creativity while minimizing cost and time (Drott, 2021).

Dissemination: ICT enables real-time distribution of gospel music through streaming platforms, social media, and online radio, ensuring global reach and accessibility. The transition from physical media to digital platforms has enhanced cross-cultural exchange and expanded gospel's audience base (Miller, 2019).



Engagement: Through interactive platforms such as live-streamed concerts, virtual choirs, and audience analytics, gospel music consumers are no longer passive listeners but active participants. These engagements foster community building and spiritual bonding beyond physical church spaces (Hess, 2018).

2.3 Outcome Layer: Transformation of Gospel Music

The outcomes of the integration of technology into gospel music are multifaceted:

1. **Accessibility:** Technology ensures that gospel music transcends geographical, linguistic, and socio-economic barriers, reaching diverse audiences worldwide.
2. **Personalization:** AI-powered recommendation systems curate playlists and suggest gospel content tailored to individual listeners, enhancing personal spiritual journeys.
3. **Globalization:** ICT facilitates intercultural collaborations among gospel artists, creating hybrid musical forms that merge traditional gospel sounds with contemporary global styles (Collins, 2020).
4. **Spiritual Enrichment:** Despite the technological mediation, the ultimate goal of gospel music remains spiritual upliftment, worship, and evangelism.

2.4 Feedback Loop: Co-evolution of Technology and Spiritual Practice

A key feature of this framework is the continuous feedback loop. As AI and ICT evolve, they enable new creative and engagement processes that reshape the form and function of gospel music. These transformations, in turn, create fresh demands and expectations from faith communities, which influence further technological innovation. For instance, the rise of virtual worship during the COVID-19 pandemic spurred advancements in live-streaming technologies and online worship platforms

tailored to churches (Savage, 2022). This cyclical relationship underscores the co-evolution of technology and spiritual practice.

2.5 Theological and Ethical Layer

Finally, surrounding the framework is a theological and ethical layer that contextualizes technological adoption within Christian doctrine and values. While AI and ICT provide opportunities for innovation, they also raise questions regarding authenticity, creativity, and the sanctity of worship. The framework acknowledges that technology must remain a servant of faith, rather than its replacement, ensuring that spiritual essence is preserved amidst digital transformation.

3.0 The Role of AI in Music Creation

Artificial Intelligence is no longer a futuristic concept but a practical tool for gospel music artists. AI-powered software can assist in various stages of music production.

Algorithmic Composition: AI can generate melodies, chord progressions, and even entire instrumental tracks based on user-defined parameters such as mood, key, and genre. This assists songwriters in overcoming creative blocks and exploring new musical ideas.

Production and Mixing: AI-powered mixing and mastering tools can automatically balance audio levels, apply equalization, and add effects, reducing the need for expensive studio time and specialized expertise. This empowers independent artists and those in developing nations with limited access to professional facilities.

Synthetic Vocal Generation: While controversial, AI voice models are capable of generating realistic singing voices. This technology can be used for creating vocal demos or for artists who may be physically unable to record.

Table 1 presents a synthesis of key applications of Artificial Intelligence in gospel music,



highlighting how emerging technologies are being utilized across various stages of music production and worship practices to enhance creativity, accessibility, and spiritual engagement.

Table 1: Applications of Artificial Intelligence in Gospel Music Production and Worship Practices

AI Application Area	Description	Relevance to Gospel Music
Algorithmic Composition	AI systems generate melodies, harmonies, and chord progressions based on input parameters	Assists gospel artists in songwriting, inspiration, and overcoming creative blocks
Lyric Generation	Natural Language Processing (NLP) tools produce song lyrics based on themes or keywords	Supports the creation of gospel-themed lyrics and scriptural expressions
Music Production & Mixing	AI automates sound engineering tasks such as mastering, equalization, and effects	Improves production quality while reducing cost and technical barriers
Voice Synthesis	AI-generated vocals replicate human singing voices	Enables demo creation and supports artists with limited vocal resources
Personalized Recommendations	AI algorithms suggest music based on user preferences and listening behavior	Enhances individualized worship experiences through tailored gospel playlists
Audience Analytics	AI analyzes listener data, engagement patterns, and demographics	Helps artists and ministries understand audience needs and optimize outreach strategies
Virtual Worship Assistance	AI chatbots and assistants support worship planning and engagement	Facilitates interactive worship experiences and spiritual guidance
Translation & Accessibility	AI tools provide real-time translation, captions, and speech-to-text services	Expands inclusivity for multilingual and differently-abled worshippers

4.0 ICT and Dissemination: From CDs to the Cloud

The emergence of Information and Communication Technology (ICT) has fundamentally transformed the modes of distribution, accessibility, and consumption of gospel music. Historically, gospel dissemination relied heavily on physical media such as vinyl records, cassette tapes, and compact discs (CDs). These formats limited the geographic reach of artists, with distribution

networks often concentrated in localized or national markets (Boyer, 2021). The transition to digital formats and cloud-based platforms, however, has been seismic, ushering in a new era of global visibility, affordability, and participatory culture in gospel music. Figure 2 illustrates the transformation of gospel music dissemination through ICT, tracing its evolution from traditional physical media to cloud-based platforms and emerging immersive technologies, while highlighting key digital channels and their impacts on global



reach, accessibility, community building, and spiritual engagement.

4.1 Digital Streaming Platforms

Digital streaming services such as Spotify, Apple Music, and YouTube have become primary dissemination channels for gospel music. These platforms provide artists with unprecedented global reach, allowing them to bypass traditional record labels and physical distribution networks. Moreover, streaming

enables on-demand **access** to vast catalogs of gospel music, offering listeners the flexibility to curate personalized playlists and discover new artists through algorithmic recommendations (Miller, 2019). For gospel musicians, these platforms also provide data-driven insights—such as listener demographics and regional popularity—that inform marketing strategies and audience targeting.

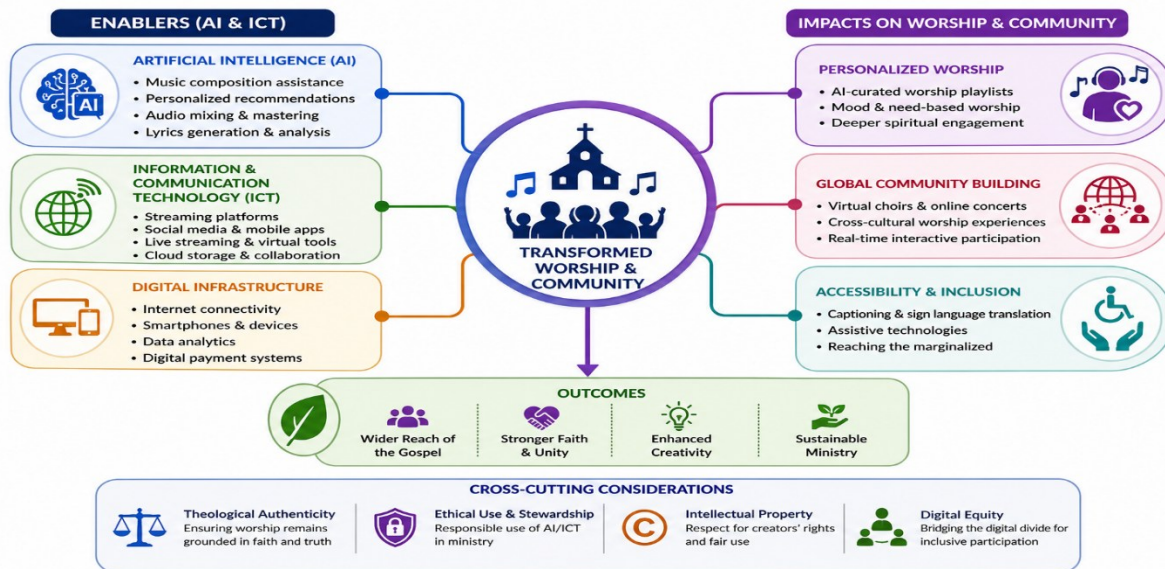


Fig. 2: Impact of AI, ICT on worship and community

4.2 Social Media and Content Creation

Social media platforms like Instagram, TikTok, and Facebook have emerged as powerful tools for promoting gospel music, engaging audiences, and cultivating virtual communities. Short-form content—such as TikTok challenges, Instagram reels, and Facebook livestreams—has proven particularly effective in capturing younger audiences and fostering viral engagement. Unlike traditional marketing, these platforms allow **direct interaction between artists and fans**, creating a sense of intimacy and authenticity that resonates with faith-based audiences (Hess, 2018). For emerging gospel artists, this bypasses the financial and structural barriers

imposed by conventional record labels, allowing them to build loyal followings independently.

4.3 Virtual and Augmented Reality in Worship Experiences

Beyond streaming and social media, emerging technologies such as Virtual Reality (VR) and Augmented Reality (AR) are redefining how gospel music is experienced. Virtual concerts and digitally constructed worship spaces enable believers to participate in immersive spiritual encounters without being physically present. For instance, VR concerts can simulate live church worship, while AR applications overlay digital elements—such as scripture verses or visual worship aids—onto physical



environments (Savage, 2022). These immersive technologies provide opportunities for global gospel audiences to experience collective worship in innovative formats, particularly relevant during disruptions such as the COVID-19 pandemic, which limited physical gatherings.

4.4 Implications for Gospel Music Ministry

The migration from CDs to the cloud signifies more than a technological shift; it represents a paradigm change in ministry and evangelism. ICT-enabled dissemination democratizes gospel access, enabling individuals across diverse socio-economic and cultural backgrounds to participate in worship through music. It also broadens the missionary mandate of gospel artists and churches, ensuring that gospel content can reach “the ends of the earth” (Acts 1:8) in ways unimaginable in previous eras. However, this transformation also raises challenges, including the monetization of digital streams, intellectual property rights, and the risk of prioritizing popularity metrics over spiritual authenticity.

In sum, ICT has transformed gospel music dissemination from localized, material-bound formats to cloud-based, globally networked platforms. The ongoing exploration of AR and VR further signals that the future of gospel music will not only be digital but increasingly immersive, interactive, and participatory.

5.0 The Impact on Worship and Community

The integration of AI and ICT into gospel music extends beyond artistic production and dissemination; it is reshaping the very nature of worship and the concept of spiritual community. By personalizing worship, enabling global connectedness, and enhancing accessibility, technology is reconfiguring how believers engage with faith practices.

5.1 Personalized Worship

AI-driven algorithms analyze user behavior, listening habits, and emotional states to create personalized playlists tailored to individual

spiritual needs (Sturm et al., 2019). For instance, platforms like Spotify and YouTube curate worship music recommendations, allowing believers to access songs that align with their mood, prayer life, or devotional patterns. Such personalization transforms worship from a one-size-fits-all experience into an intimate spiritual journey, meeting worshippers where they are and fostering deeper engagement.

5.2 Global Community Building

ICT has enabled the rise of transnational worship communities. Through live-streamed services, virtual choirs, and online gospel concerts, worshippers can gather in digital spaces regardless of geographic boundaries (Campbell & Tsuria, 2021). A gospel artist performing from their living room can lead worshippers from Africa, Asia, Europe, and the Americas simultaneously, fostering a profound sense of global unity and shared faith. This interconnectedness reflects the biblical vision of the Church as a universal body of believers (1 Corinthians 12:12–27) while also offering practical tools for community building in a digitally mediated world.

5.3 Accessibility for the Disabled

Technology is also breaking barriers for worshippers with disabilities. AI-powered captioning and real-time sign language translation make digital gospel concerts and church services accessible to the hearing impaired. Similarly, voice commands, screen readers, and smart assistants facilitate participation for the visually impaired (Savage, 2022). These innovations ensure that the gospel message, mediated through music, is inclusive and accessible, fulfilling the moral imperative of the Church to reach marginalized groups.

6.0 Ethical and Theological Considerations

While the integration of AI and ICT offers vast opportunities, it also introduces complex ethical and theological questions. These challenges must be critically examined to



ensure that the spiritual essence of gospel music is preserved amidst technological innovation. Table 2 provides a comparative overview of the major opportunities and

challenges associated with the integration of Artificial Intelligence and ICT in gospel music ministry, highlighting the balance required for responsible and theologically sound adoption.

Table 2: Opportunities and Challenges of AI and ICT Integration in Gospel Music Ministry

Dimension	Opportunities	Challenges
Creativity & Innovation	Enhances music composition, experimentation, and production efficiency	Risk of diminished human creativity and over-reliance on automated systems
Worship Experience & Evangelism Outreach	Enables personalized and immersive worship experiences Expands global reach through digital platforms and targeted messaging	Raises concerns about authenticity and spiritual depth of AI-generated content Potential cultural insensitivity and misinterpretation of religious messages
Accessibility & Inclusion	Improves access for remote, disabled, and marginalized communities	Digital divide limits access in under-resourced regions
Community Building	Facilitates global virtual communities and real-time engagement	May weaken physical fellowship and traditional church structures
Efficiency & Cost	Reduces production costs and technical barriers for artists and ministries	Dependence on technology infrastructure and associated maintenance costs
Intellectual Property Theological Integrity	Creates new models for content ownership and distribution Provides new tools for teaching and spreading doctrine	Unclear copyright ownership and legal disputes over AI-generated content Challenges traditional views on divine inspiration and human role in worship creation

6.1 Theological Authenticity

One of the most pressing concerns is the question of spiritual authenticity. Can a song composed by an algorithm genuinely serve as an act of worship? Worship music has traditionally been seen as an expression of human devotion inspired by the Holy Spirit (Boyer, 2021). AI-generated compositions raise theological debates about whether such creations are infused with spiritual meaning or merely represent soulless imitations of sacred expression. This tension requires ongoing theological dialogue to discern the role of human creativity versus machine assistance in worship contexts.

6.2 Intellectual Property and Copyright

The use of AI in music creation complicates ownership and copyright issues. If an AI system generates lyrics, melodies, or harmonies, questions arise regarding authorship: does ownership belong to the programmer, the artist using the AI, or the AI system itself (Drott, 2021)? These uncertainties challenge existing copyright frameworks, potentially leading to disputes within the gospel music industry, where both spiritual integrity and economic sustainability are at stake.



6.3 The Digital Divide

Finally, the benefits of technological innovation are not equally distributed. The digital divide, the gap between communities with access to advanced ICT infrastructure and those without, remains a major challenge (Collins, 2020). While artists and congregations in developed regions can leverage streaming, VR worship, and AI-enhanced tools, those in developing regions may lack the resources or technical skills to participate fully in this digital paradigm. This inequality risks creating a two-tiered gospel music ecosystem, where certain voices are amplified while others remain marginalized. Addressing this divide is essential to ensuring that the global spread of gospel music remains inclusive and equitable.

7.0 Conclusion

Artificial Intelligence (AI) and Information and Communication Technology (ICT) are profoundly reshaping the landscape of gospel music, serving as powerful enablers of creativity, dissemination, and spiritual engagement. From AI-assisted music composition and personalized worship playlists to ICT-enabled streaming platforms, social media outreach, and immersive worship experiences, these technologies are transforming how gospel music is created, shared, and experienced.

At the same time, the integration of AI and ICT into gospel music is not without ethical and theological challenges. Questions of authenticity, intellectual property, and the digital divide highlight the need for careful reflection to ensure that technological innovation enhances rather than diminishes the sacred purpose of worship and evangelism. Gospel music must remain rooted in divine inspiration and human creativity, even as it embraces digital transformation.

Looking ahead, the future of gospel music points toward a harmonious interface where

faith and technology co-evolve. This future envisions worship that is global in reach, inclusive in access, and enriched by innovation, while remaining grounded in spiritual authenticity. As gospel music continues to adapt, the convergence of human creativity, divine inspiration, and technological advancement will open new horizons for ministry, healing, and the global spread of the gospel message.

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Not applicable.

Consent to Publish

Not applicable

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Authors' Contributions

All components of the work were carried out by the author.

