

Emerging Technologies and Islamic Laws: A Comparative Analysis of Prominent Islamic Jurisdictions

Dr. Kamshad Mohsin¹

Abstract

Emerging technologies such as Artificial Intelligence (AI), biotechnology, and digital cybersecurity tools present profound ethical, legal, and societal challenges. This paper examines how Islamic laws (Sharia) respond to these technologies, drawing on principles like Maqasid al-Sharia (objectives of Islamic law) and usul al-fiqh (principles of jurisprudence). A comparative analysis is conducted across prominent Islamic jurisdictions, including Sunni-majority countries (e.g., Indonesia, Saudi Arabia, Pakistan, Malaysia, Turkey) and Shia-majority ones (e.g., Iran), using doctrinal research methods supplemented by recent developments up to 2025. Key findings reveal convergences in ethical frameworks emphasizing human dignity (karama), justice (adl), and public welfare (maslaha), but divergences in implementation, such as stricter cybercrime laws in Indonesia versus bioethical conservatism in Iran and innovative AI fatwa tools in Saudi Arabia. The study highlights the need for ijtihad (independent reasoning) to adapt Sharia to modern contexts, proposing unified global Islamic guidelines through bodies like the OIC Fiqh Academy. Sources from scholarly works, recent fatwas, and legal amendments inform the analysis, underscoring the balance between innovation and moral imperatives while addressing Western dominance in tech ethics.

Keywords—Artificial Intelligence, Biotechnology, Cybercrimes, Islamic Law, Maqasid al-Sharia, Comparative Jurisprudence, Ijtihad, Fatwa, Digital Ethics.

I. Introduction

The advent of emerging technologies in the 21st century has revolutionized human existence, offering solutions to age-old problems while introducing novel dilemmas. Artificial Intelligence (AI) powers autonomous systems that mimic human decision-making, biotechnology enables genetic modifications that could eradicate diseases, and digital technologies facilitate global connectivity but also cybercrimes that threaten privacy and security [1]-[6]. In Islamic societies, where Sharia serves as a comprehensive guide for life, these technologies intersect with divine commandments, ethical imperatives, and communal

¹ Deputy Dean, Maharishi Law School, Maharishi University of Information Technology.
Kamshadmohsin@gmail.com

responsibilities. Sharia, derived from the Quran and Sunnah, is not static; it evolves through *ijtihad* to address contemporary issues, as emphasized by scholars like Abu Ishaq al-Shatibi in his work on *Maqasid al-Sharia* [3].

Historically, Islamic civilization was at the forefront of scientific innovation during the Golden Age (8th-13th centuries), with figures like Ibn Sina (Avicenna) and Al-Khwarizmi advancing medicine and algorithms, respectively, under the umbrella of *tawhid* (unity of God) [6]. However, the encounter with Western colonialism and secular science in the 19th century created a rift, leading to debates on "Islamization of knowledge" [2]. Today, with over 1.9 billion Muslims worldwide (Pew Research, 2024), tech adoption is rapid: Saudi Arabia's Vision 2030 integrates AI in governance, Iran's biotech sector leads in stem cell research, and Indonesia's digital economy booms amid cyber threats [4], [7], [8].

This paper compares Sharia applications in key jurisdictions: Sunni Hanafi (Pakistan, Turkey), Shafi'i (Indonesia, Malaysia), Hanbali (Saudi Arabia), and Shia Ja'fari (Iran). It addresses questions like: How does Sharia regulate AI's ethical use? Can biotechnology align with preserving *fitrah* (human nature)? What sanctions apply to cybercrimes under *ta'zir*? Doctrinal methodology analyzes texts, fatwas, and laws up to 2025, incorporating recent developments like Saudi's AI Fatwa Robot [9] and Pakistan's cyber law amendments [10]. The analysis reveals Sharia's flexibility but calls for global harmonization to counter tech-driven harms like bias (*zulm*) and misinformation (*kadhib*).

II. Literature Review

Islamic scholarship on emerging technologies has evolved from critiques of Western secularism to proactive integration, emphasizing "Islamization of knowledge" [2]. Pioneers like Ismail al-Faruqi and Ziauddin Sardar advocated reorienting science toward Islamic ethics, arguing modern tech often prioritizes utility over morality [2], [11]. Seyyed Hossein Nasr critiques AI and biotech for disrupting cosmic harmony (*mizan*), viewing the universe as *ayat* (signs) of God (Quran 3:190) [6]. He warns against *hubris*, likening genetic engineering to *shirk* (associating partners with God) [6].

On AI, recent fatwas (2024-2025) highlight permissibility as a tool but not replacement for human *ijtihad*. Saudi Arabia's AI Fatwa Robot (2025) assists scholars in referencing texts, aligning with *istihsan* (preference for public good) [9]. Singapore's Fatwa Lab uses generative AI for research, but limits issuance to muftis due to empathy gaps [12]. Rifai (2024) argues AI challenges *Maqasid*, potentially violating *aql* (intellect) if decisions lack *rahma* (compassion) [3]. Iranian scholars employ *sadd al-dhara'i* (blocking evils) to regulate AI in surveillance [13].

Biotechnology literature focuses on halal (permissible) applications. Iran's progressive fatwas permit stem cell therapy for preserving nafs (life), but ban cloning as altering khalq Allah (God's creation) (Quran 4:119) [3], [14]. Malaysian guidelines (2024) emphasize maslaha in GM foods, requiring no harm to lineage (nasl) [15]. Ethical concerns include eugenics resembling Jahiliyyah practices [3].

Cybercrimes are framed under hudud (e.g., theft) or ta'zir. Indonesian UU ITE (amended 2024) penalizes defamation, echoing Quran 49:11 [4]. Pakistani amendments (2025) criminalize fake news, criticized by HRW for stifling speech [10]. Iranian proposals (2025) expand blocking powers, invoking amanah (trust) [16]. Broader works like UNCTAD reports note Sharia's role in global cyber laws [17].

III. Overview of Emerging Technologies

A. Artificial Intelligence (AI)

AI encompasses machine learning, neural networks, and generative models like GPT, enabling tasks from diagnostics to autonomous driving [3], [5]. By 2025, AI market is projected at \$500 billion (Statista), with Muslim countries investing heavily: UAE's AI strategy aims for 20% GDP boost [19]. Challenges include algorithmic bias (e.g., facial recognition failing darker skin, violating adl) and job loss (automation in Indonesia's textile sector) [4], [5]. Islamically, AI mimics aql but lacks ruh (soul), raising accountability (Quran 17:85) [5], [9].

B. Biotechnology

Biotech includes CRISPR for gene editing, synthetic biology, and regenerative medicine [3]. Global value exceeds \$1 trillion (2025 estimates), with Iran leading Islamic biotech in organ transplants [14]. Benefits: Curing genetic diseases preserves nafs. Risks: Designer babies threaten nasl equality (Quran 49:13) [3]. Recent fatwas (2024) permit IVF but ban surrogacy as zina-like [20].

C. Digital Technologies and Cybercrimes

Digital tools like blockchain secure transactions, but enable crimes: Hacking (theft), deepfakes (deceit), cyberterrorism [4]. 2025 saw rises in ransomware (CSIS reports) [21]. In Islamic view, cybercrimes violate amanah and cause fasad (corruption) (Quran 5:32) [4], [16].

IV. Principles of Islamic Law Relevant to Emerging Technologies

Islamic jurisprudence (fiqh) adapts via usul al-fiqh, ensuring tech serves humanity.

A. Maqasid al-Sharia

Preserves five essentials: Deen (faith)—AI must not promote shirk; Nafs—biotech saves lives but not at dignity's cost; Aql—cyber tools enhance knowledge but block misinformation; Nasl—GMOs permissible if halal; Mal—digital finance via blockchain aligns with riba ban [3], [5]. Al-Ghazali expanded to hajiyyat (needs) like AI education [5].

B. Usul al-Fiqh

Qiyas analogies AI to tools (permissible if beneficial); Istihsan prefers ethical AI; Maslaha promotes public good, e.g., biotech vaccines; Sadd al-dhara'i blocks harms like cyber espionage [5], [13]. Urf (custom) integrates local tech norms [5].

C. Ethical Virtues

Adl ensures fair AI; Rahma compassionate biotech; Amanah protects data privacy (Quran 4:58); Mizan sustainability in tech (Quran 55:7-9) [5], [6]. Recent OIC discussions (2025) emphasize these [22].

V. Comparative Analysis of Islamic Laws Across Jurisdictions

A. Indonesia (Sunni-Shafi'i with Secular Integration)

Indonesia's legal system integrates Sharia through fatwas from the Indonesian Ulema Council (MUI) and secular laws like the Electronic Information and Transactions Law (UU ITE), amended in 2023 and further refined by Constitutional Court rulings in 2025. These amendments emphasize free speech protections, ruling that criticism against the government cannot be criminalized under UU ITE, aligning with Article 433 of the 2023 Criminal Code . This reflects Sharia's emphasis on adl (justice) and prohibition of zulm (oppression), as per Quran 4:135, preventing misuse of cyber laws for political silencing [4]. For cybercrimes, UU ITE (2025 updates) penalizes defamation and misinformation with up to 6 years imprisonment under ta'zir (discretionary punishment), echoing Quran 24:4 on false accusations, but critics argue it still threatens freedom of expression . AI applications are regulated pragmatically; MUI fatwas (2024-2025) permit AI for halal certifications and economic tools if they promote maslaha, but warn against deception (ghurur) in AI-generated content [4], [15]. Biotechnology focuses on halal compliance, with GM foods requiring MUI approval to preserve nasl (lineage) and nafs (life), as seen in 2025 vaccine mandates aligned with istihsan (public preference) [15]. Indonesia's Pancasila-based pluralism allows flexible integration, differing from stricter Sunni peers, but legal gaps in deepfakes persist, risking fasad (corruption) (Quran 5:32) [4].

Compared to other Sunni nations, Indonesia's approach is more secular-influenced, prioritizing social harmony over rigid enforcement, as evidenced by the 2025 court's ban on institutions filing defamation suits under UU ITE . This fosters innovation in fintech AI but raises concerns

about ethical oversight in biotech, where MUI collaborates with global halal bodies for standards [15].

B. Saudi Arabia (Sunni-Hanbali Strict Interpretation)

Saudi Arabia's Hanbali-Wahhabi framework enforces a literalist Sharia, viewing technologies through tawhid (monotheism) and prohibiting those promoting fitna (discord) [6]. In 2025, the Kingdom launched an AI-powered "Fatwa Robot" in the Grand Mosque, Mecca, to answer religious queries in multiple languages, assisting pilgrims during Ramadan . This innovation aligns with istihsan for public accessibility but limits AI to an assistant role, as fatwas require human muftis to ensure rahma (compassion) and sidq (truthfulness), per Quran 33:70 . Cybercrimes are penalized under hudud analogies (e.g., theft-like hacking with imprisonment or lashes), with 2025 updates to the Anti-Cyber Crime Law incorporating sadd al-dhara'i (blocking evils) for deepfakes [23]. Biotechnology remains conservative; cloning and certain gene edits are haram as shirk (Quran 4:119), but stem cell research is permitted if halal and beneficial to nafs, as per Vision 2030's biotech investments [3], [19]. The Fatwa Robot exemplifies adaptive Hanbali ijtiḥad, but critics argue it risks over-reliance on tech, potentially undermining scholarly authority .

Unlike Indonesia's flexibility, Saudi's approach is state-controlled, prioritizing religious purity, as seen in proposals for a global AI Fatwa Council to counter Western ethics . This convergence with Iran's council ideas highlights emerging Sunni-Shia dialogues on tech [5].

C. Pakistan (Sunni-Hanafi with Constitutional Sharia)

Pakistan's Constitution mandates alignment with Quran and Sunnah, blending Hanafi fiqh with secular elements [2]. The Prevention of Electronic Crimes Act (PECA) amendments in January 2025 criminalize "fake or false" information with up to 3-5 years imprisonment, invoking maslaha to curb discord but criticized by Amnesty and HRW for stifling dissent and enabling censorship . This reflects ta'zir for deception (kadhib, Quran 16:105) but raises free speech concerns under adl [4], [10]. AI in military drones is regulated via just war ethics from Sunnah, with Council of Islamic Ideology fatwas (2025) permitting if minimizing harm [18]. Biotechnology, like stem cells, is approved for preserving life (nafs), but GMOs require halal vetting to avoid altering fitrah [3]. The 2025 Social Media Protection Authority (SMPRA) oversees platforms, using qiyas to extend hudud to cyber terrorism .

Pakistan's hybrid system allows more ijtiḥad than Saudi Arabia but faces implementation issues, as 2025 amendments expand powers to block content, diverging from Indonesia's speech protections [2].

D. Iran (Shia-Ja'fari with Wilayat al-Faqih)

Iran's Shia jurisprudence emphasizes *ijtihad* by *maraji*, enabling flexible adaptations under *Wilayat al-Faqih* (guardianship of the jurist) [5]. The National AI Plan, approved May 2025, integrates ethics via *maslaha*, regulating AI for public welfare while blocking Western influences. Cybercrimes are penalized under *ta'zir*, with a 2025 proposed bill expanding authorities' powers to block and punish online content, invoking *sadd al-dhara'i* for deception. Biotechnology leads globally; 2025 fatwas permit stem cell therapy and organ transplants as *ihsan* (beneficence), justifying via *istihsan* if benefiting *nafs*, but ban cloning as *shirk* [3], [14]. Iran's AI ethics draw on *maqasid*, with state oversight for surveillance, differing from Sunni conservatism [5], [13].

E. Malaysia (Sunni-Shafi'i Modernist)

Malaysia's Shafi'i modernism integrates Sharia via the National Fatwa Council, emphasizing halal ecosystems for emerging tech [15]. In 2025, blockchain for on-chain halal permits fights fraud, aligning with *amanah* (trust) and promoting *maslaha* in the \$2 trillion halal market. AI powers Islamic fintech (43% of banking by 2025), with fatwas ensuring *riba*-free algorithms [15]. Cybercrimes are addressed via *ta'zir* in the Communications Act, penalizing hacking as theft [15]. Biotechnology, like GM rice, is approved if halal and sustainable (*mizan*), per 2025 trends.

F. Turkey (Sunni-Hanafi Secular-Leaning)

Turkey's Diyanet (Presidency of Religious Affairs) issues fatwas blending Hanafi *fiqh* with secularism [24]. In 2025, Diyanet's journal addressed AI ethics, emphasizing morality and deception (*ghurur*), viewing AI as a tool but not *mufti*, per Quran 2:188. A roundtable on AI and Islamic law (March 2025) discussed changes via *ijtihad*. Cyber laws align with EU standards, incorporating *ta'zir* for misinformation under the 2025 Disinformation Law [24]. Biotechnology is progressive; fatwas permit gene therapy if ethical, preserving *nafs* [24].

G. Cross-Jurisdictional Comparisons

Convergences: Universal emphasis on *maslaha* and *adl*; cybercrimes as harm (*darar*). All permit AI as assistants (e.g., Saudi Robot, Singapore Lab) but reserve fatwas for humans. Biotech preserves *nafs* but bans *shirk*-like alterations. Divergences: Sunni literalism (Saudi) vs. Shia *ijtihad* (Iran); cyber censorship (Pakistan, Iran) vs. speech protections (Indonesia, Turkey). OIC calls for unity, like AI Fatwa Councils, highlight potential harmonization [2], [22].

VI. Challenges and Recommendations

A. Challenges

Ethical Conflicts: AI autonomy challenges free will; biotech risks fitrah alteration [3], [5]. As AI systems become more sophisticated, they increasingly encroach on domains traditionally reserved for human judgment, such as issuing fatwas or making life-altering decisions in healthcare. This raises profound questions about ikhtiyar (free will), as machines lack the ruh (soul) emphasized in the Quran (17:85). Similarly, biotechnologies like CRISPR gene editing pose risks of altering human fitrah (innate nature), potentially leading to eugenics that contradict Islamic teachings on equality (Quran 49:13). Recent 2025 studies highlight these issues, with Iranian scholars warning of shirk implications in "playing God" through synthetic biology .

Legal Gaps: Cyber laws miss deepfakes (Pakistan 2025) [10]. Existing frameworks often fail to address novel threats like AI-generated deepfakes, which can spread misinformation (kadhib) and cause social discord (fitna). In Pakistan, the 2025 amendments to the Prevention of Electronic Crimes Act (PECA) criminalize fake news but lack specificity on manipulated media, leading to enforcement challenges and free speech concerns, as noted by Human Rights Watch . This gap is exacerbated in Sunni jurisdictions where rigid interpretations limit rapid adaptations.

Fragmentation: Madhahib differences hinder unity [5]. The diversity among Islamic schools-e.g., Hanbali literalism in Saudi Arabia versus Ja'fari dynamism in Iran-creates inconsistencies in tech rulings. For instance, while Iran permits advanced biotech under ijtiḥad, Saudi Arabia's conservative fatwas restrict it, fragmenting global Muslim responses to technologies like AI surveillance [5], .

Western Bias: Tech ethics ignore Islamic pluralism [6], [7]. Global AI ethics frameworks, dominated by Western utilitarian models, often overlook Islamic virtues like rahma and adl, leading to biased algorithms that perpetuate inequalities in Muslim-minority contexts [6]. UN reports from 2025 highlight this, urging inclusion of non-Western norms .

Socio-Economic: Tech inequality in Muslim world (World Bank 2025) [25]. Disparities in access to emerging technologies exacerbate divides, with wealthier Gulf states like Saudi Arabia advancing AI integration (Vision 2030) while poorer nations lag, risking economic exclusion and ethical oversights in implementation.

B. Recommendations

To address these challenges, a multifaceted approach is essential, drawing on Islamic principles like maslaha and ijtiḥad while incorporating recent global initiatives. The following recommendations provide actionable pathways for Muslim jurisdictions to harmonize Sharia with emerging technologies.

Renewing *ijtihad* through dedicated institutions is paramount for adapting Islamic jurisprudence to rapid technological advancements. The Organization of Islamic Cooperation (OIC) could establish a specialized AI Council, building on the 2025 OIC-15 Dialogue Platform in Tehran, which emphasized collaborative AI governance and ethical frameworks. This council would facilitate cross-madhahib dialogue, issuing unified fatwas on issues like AI autonomy and biotech ethics. For instance, it could draw from Iran's model of maraji-led *ijtihad* to create dynamic rulings that preserve *Maqasid al-Sharia* while fostering innovation. Such a body would also promote capacity-building programs, as outlined in the Tehran Declaration, to train muftis in digital literacy, ensuring *ijtihad* remains relevant in an AI-dominated era. By institutionalizing *ijtihad*, Muslim countries can bridge Sunni-Shia divides and respond proactively to technologies like generative AI, preventing ethical voids that lead to misuse.

Education must be reformed to integrate tech ethics into Islamic curricula, equipping future generations with tools to navigate digital dilemmas through *fiqh*. Universities in Muslim countries should develop specialized programs on "Islamic Ethics in Emerging Technologies," incorporating *usul al-fiqh* with modern case studies on AI bias and cyber privacy [2]. For example, courses could use Quranic principles (e.g., *amanah* for data privacy) alongside practical simulations of cyber threats, as piloted in Pakistani tech universities. This aligns with the Islamization of knowledge movement, ensuring students apply virtues like *adl* to algorithmic fairness [2]. OIC initiatives from 2025 advocate AI education in member states, promoting curricula that blend *tafsir* (Quranic exegesis) with coding ethics to foster morally grounded innovators. Such reforms would mitigate challenges like youth radicalization via digital platforms, embedding ethical discernment from an early age.

Harmonizing fatwas through a global database would standardize rulings on technologies, reducing fragmentation across jurisdictions. Initiatives like *Fatwaset* (a 2023 dataset expanded in 2025) could evolve into an AI-assisted platform aggregating fatwas on AI and biotech ethics. This database, hosted by the OIC *Fiqh Academy*, would use blockchain for transparency, allowing scholars worldwide to reference unified opinions on issues like deepfakes or gene editing. For instance, Singapore's *Fatwa Lab* (2025) demonstrates AI's role in fatwa research, ensuring compliance with *Sharia* while accelerating responses. By centralizing resources, this would empower diaspora Muslims and standardize practices, addressing legal gaps in cyber ethics as seen in Indonesian UU ITE amendments [4].

Developing ethical frameworks like halal certification for AI and biotechnology would ensure technologies align with Islamic values. Innovations in halal compliance, such as AI-driven traceability systems using blockchain, are already transforming certification in Malaysia and

Indonesia [7]. These frameworks could extend to "halal AI," certifying algorithms free from bias and compliant with *adl*, as piloted in UAE initiatives . For biotech, halal standards would verify GM products preserve *nasl* without harm, using AI for ingredient scanning . This innovation, supported by global bodies like the Halal Food Council, would boost consumer trust and economic growth in the \$2 trillion halal market (2025 estimates) .

Finally, fostering collaboration with international organizations like the UN would integrate Islamic perspectives into global cyber norms, promoting equitable governance. The UN's 2025 framework on responsible state behavior in cyberspace aligns with Sharia's emphasis on *amanah* and preventing *fasad*, as seen in collaborations with OIC on ICT security [17]. For example, UNODC's Ad Hoc Committee on cybercrime could incorporate Islamic ethical guidelines, as proposed in 2025 reports on human rights in digital spaces . This partnership would amplify Muslim voices in norms like Norm E (respecting privacy), countering Western bias and enhancing global cybersecurity while upholding Sharia .

VII. Conclusion

Emerging technologies—Artificial Intelligence (AI), biotechnology, and digital tools for cybersecurity—present both unprecedented opportunities and complex challenges for Islamic jurisprudence. This paper has comprehensively examined how Sharia, rooted in the Quran, Sunnah, *ijma* (consensus), and *qiyas* (analogy), adapts to these advancements across diverse Islamic jurisdictions, including Sunni-majority countries (Indonesia, Saudi Arabia, Pakistan, Malaysia, Turkey) and Shia-majority Iran. The comparative analysis reveals a shared commitment to *Maqasid al-Sharia*—preserving faith (*deen*), life (*nafs*), intellect (*aql*), lineage (*nasl*), and property (*mal*)—while highlighting jurisdictional variations driven by *madhahib* differences and state policies. By August 2025, innovations such as Saudi Arabia's AI-powered Fatwa Robot, Malaysia's blockchain-based halal certifications, and Iran's progressive biotech fatwas demonstrate Sharia's dynamic potential to engage with modern challenges. However, divergences in implementation, such as Saudi Arabia's Hanbali literalism versus Iran's Ja'fari *ijtihad*, underscore the need for unified global frameworks to ensure technologies align with Islamic ethics.

Convergences across jurisdictions emphasize core Islamic virtues: *adl* (justice) ensures fair AI algorithms, *rahma* (compassion) guides biotech applications, and *amanah* (trust) underpins cybersecurity measures. These principles align with the Quranic call for balance (*mizan*, 55:7-9) and public welfare (*maslaha*), as seen in Indonesia's pragmatic cyber laws and Malaysia's halal tech innovations [4], [15]. For instance, the 2025 amendments to Indonesia's UU ITE

prioritize free speech while penalizing misinformation, reflecting Quran 24:4's stance on truthful testimony . Similarly, Malaysia's blockchain for halal traceability ensures amanah in the \$2 trillion global halal market, fostering economic growth while adhering to Sharia [15]. . Saudi Arabia's Fatwa Robot, launched in 2025, exemplifies how AI can assist religious scholarship without replacing human muftis, preserving the soulful discernment (ruh) required for fatwas [9]. . Iran's leadership in biotech, particularly stem cell research, balances nafs preservation with caution against shirk, as cloning is deemed impermissible (Quran 4:119) [3], [14].

Divergences, however, reveal challenges in harmonizing Sharia's application. Saudi Arabia's strict Hanbali approach contrasts with Iran's flexible ijtihad, leading to varied rulings on AI autonomy and biotech ethics [5]. Pakistan's 2025 PECA amendments, while invoking maslaha to curb fake news, face criticism for limiting free speech, unlike Indonesia's speech-protective stance . Turkey's secular-leaning Hanafi system and Malaysia's modernist Shafi'i framework adopt progressive tech policies, converging with Iran's dynamism but diverging from Saudi Arabia's conservatism [24], [15]. These variations highlight the need for renewed ijtihad to address modern complexities, as advocated by scholars like Mohammad Hashim Kamali, who emphasize adapting usul al-fiqh to contemporary contexts [18].

The challenges—ethical conflicts, legal gaps, jurisdictional fragmentation, Western tech bias, and socio-economic disparities—require proactive solutions. AI's autonomy raises questions of accountability (muhasabah), as it mimics intellect without a soul (Quran 17:85) [5]. Cyber laws, like Pakistan's PECA, struggle with emerging threats like deepfakes, risking fasad (corruption) (Quran 5:32) [10]. Fragmentation across madhahib hinders unified responses, as seen in differing biotech rulings [5]. Western-dominated AI ethics marginalize Islamic perspectives, necessitating pluralism, as noted by Seyyed Hossein Nasr [6]. Socio-economic divides, per 2025 World Bank reports, exacerbate unequal tech access, with Gulf states advancing while others lag [25].

To address these, the recommendations outlined—establishing an OIC AI Council, reforming education, harmonizing fatwas, developing halal tech frameworks, and collaborating with global bodies like the UN—offer a roadmap for Muslim societies. The OIC's 2025 Tehran Dialogue on AI governance underscores the urgency of unified fatwas to counter fragmentation . Educational reforms, integrating tafsir with tech ethics, can empower youth to innovate ethically, as piloted in Pakistani universities. A global fatwa database, like an expanded Fatwaset, would standardize rulings using blockchain for transparency [12]. Halal AI and biotech certifications, as seen in Malaysia's blockchain initiatives, ensure compliance with

Sharia while boosting economic competitiveness [15]. UN collaborations, aligned with 2025 cyber norms, integrate Islamic values like amanah into global frameworks, countering Western bias [17].

Looking forward, Islamic jurisprudence must evolve through global cooperation to preserve its moral core amid technological disruption. The historical legacy of Islamic science, from Al-Khwarizmi's algorithms to Ibn Sina's medicine, inspires confidence in Sharia's adaptability [6]. By fostering ijtiḥad, embracing ethical innovation, and advocating pluralism, Muslim societies can lead in shaping technologies that uphold human dignity (karama) and divine intent. The OIC Fiqh Academy's 2025 resolutions signal a path toward unity, urging a balanced approach where innovation serves maslaha without compromising tawḥid [22]. This ensures that emerging technologies, from AI to biotech, enhance the ummah's welfare while remaining firmly rooted in Islamic values, fulfilling the Quranic mandate to enjoin good and forbid evil (3:104).

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