

الذكاء الاصطناعي والهوية الجندرية الثقافية: دراسة عن المرأة الكردية والاستعمار الرقمي

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**الكلمات المفتاحية:** الذكاء الاصطناعي، الهوية الجنسية، المرأة الكردية، النسوية غير الغربية، التمثيل الثقافي، الاستعمار الرقمي

**كيفية اقتباس البحث**

شريف , داريا سوركو , الذكاء الاصطناعي والهوية الجندرية الثقافية: دراسة عن المرأة الكردية والاستعمار الرقمي، مجلة مركز بابل للدراسات الانسانية، آذار ٢٠٢٦، المجلد: ١٦، العدد: ٣.

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## ARTIFICIAL INTELLIGENCE AND CULTURAL GENDER IDENTITY: A STUDY OF KURDISH WOMEN AND DIGITAL COLONIALITY

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**Keywords** : Artificial Intelligence, gender identity, Kurdish women, non-Western feminism, cultural representation, digital colonialism

### How To Cite This Article

Shareef , Daria Soorkew , ARTIFICIAL INTELLIGENCE AND CULTURAL GENDER IDENTITY: A STUDY OF KURDISH WOMEN AND DIGITAL COLONIALITY , Journal Of Babylon Center For Humanities Studies, March 2026, Volume:16, Issue 3.



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### Abstract

This study examines the intersection of artificial intelligence and cultural gender identity through the lens of non-Western women, with particular focus on Kurdish women as a case study. It investigates how AI systems perpetuate, challenge, or transform representations of gender identity within marginalized cultural contexts. The study employs an interdisciplinary framework combining critical feminist theory, postcolonial science and technology studies, and cultural analysis. It synthesizes findings from recent empirical research on AI bias across linguistic contexts, examines case studies of Kurdish cultural production using AI technologies (Zozan C and Morehshin Allahyari) and analyzes theoretical frameworks including intersectionality and non-Western feminist ethics. The research reveals that AI systems consistently reproduce Western-centric gender biases while simultaneously erasing or distorting non-Western women's identities. Kurdish women face a "double marginalization" in AI systems—gendered stereotyping compounded by cultural invisibility. However, emergent practices by Kurdish artists, musicians, and activists

demonstrate possibilities for reclaiming AI as a tool for cultural preservation, counter-representation, and identity reimagining. The study identifies significant linguistic inequities in AI training data that disproportionately affect Kurdish-language speakers and documents how gender bias manifests differently across cultural contexts. This study provides the first comprehensive examination of Kurdish women's relationship to AI systems, bridging critical AI studies with Middle Eastern gender scholarship. It introduces the concept of "digital coloniality" to describe how AI systems perpetuate historical patterns of cultural marginalization, while proposing a framework for "culturally-sovereign AI" grounded in non-Western feminist epistemologies.

## ملخص

يتناول هذا البحث تقاطع الذكاء الاصطناعي والهوية الجندرية الثقافية من منظور النساء غير الغربيات، مع التركيز بشكل خاص على النساء الكرديات كدراسة حالة. يكشف البحث عن كيفية قيام أنظمة الذكاء الاصطناعي بترسيخ أو تحدي أو تغيير تمثيلات الهوية الجنسية ضمن السياقات الثقافية المهمشة. تستخدم الدراسة إطارًا متعدد التخصصات يجمع بين النظرية النسوية النقدية، ودراسات العلوم والتكنولوجيا ما بعد الاستعمارية، والتحليل الثقافي. كما تُركّب نتائج البحوث التجريبية الحديثة حول تحيز الذكاء الاصطناعي عبر السياقات اللغوية، وتدرس حالات عملية للإنتاج الثقافي الكردي باستخدام تقنيات الذكاء الاصطناعي (مثل زوزان سي وموراشين اللهياري)، وتحلل الأطر النظرية بما في ذلك التقاطعية والأخلاقيات النسوية غير الغربية. يكشف البحث أن أنظمة الذكاء الاصطناعي تُعيد إنتاج التحيزات الجندرية الغربية باستمرار، بينما تمحو أو تشوه في الوقت نفسه هويات النساء غير الغربيات. تواجه النساء الكرديات "تهميشًا مزدوجًا" في أنظمة الذكاء الاصطناعي، يتمثل في التنميط الجندري الذي يتفاقم بسبب التهميش الثقافي. مع ذلك، تُظهر الممارسات الناشئة للفنانين والموسيقيين والناشطين الأكراد إمكانيات لاستعادة الذكاء الاصطناعي كأداة للحفاظ على التراث الثقافي، ومواجهة التشويه، وإعادة صياغة الهوية. تُحدد هذه الورقة البحثية أوجه عدم المساواة اللغوية الهامة في بيانات تدريب الذكاء الاصطناعي، والتي تؤثر بشكل غير متناسب على المتحدثين باللغة الكردية، وتوثق كيف يتجلى التحيز الجنسي بشكل مختلف عبر السياقات الثقافية. تُقدم هذه الورقة البحثية أول دراسة شاملة لعلاقة المرأة الكردية بأنظمة الذكاء الاصطناعي، رابطة بين الدراسات النقدية للذكاء الاصطناعي ودراسات النوع الاجتماعي في الشرق الأوسط. كما تُقدم مفهوم "الاستعمار الرقمي" لوصف كيفية إدامة أنظمة الذكاء الاصطناعي للأنماط التاريخية للتهميش الثقافي، مع اقتراح إطار عمل للذكاء الاصطناعي ذي السيادة الثقافية المُستند إلى مناهج معرفية نسوية غير غربية.

## 1. Introduction

### 1.1 The Algorithmic Mirror: AI as Cultural Arbiter

Artificial intelligence has ceased to be merely a technical domain and has become a cultural force of profound significance. Large language models, generative image systems, and recommendation algorithms now mediate how individuals and communities are seen, represented, and understood across global digital spaces. These systems do not simply reflect reality—they actively construct it, shaping perceptions of gender, culture, and identity with



each interaction. As MIT<sup>1</sup> Technology Review has documented, AI systems are "quietly propagating stereotypes around the world" packaging human biases with algorithmic authority and exporting them across cultural boundaries (Birhane, 2021: 9).

For non-Western women, this presents a particular crisis of representation. Positioned at the intersection of gendered and cultural marginalization, they face what this study terms "algorithmic double erasure"—the compounding effect of AI systems that are simultaneously gender-biased and culturally myopic. When these systems generate images of "Middle Eastern women" when they translate Kurdish poetry, when they define what constitutes a "role model" in Somali or Urdu, they are not merely processing data but participating in the ongoing construction of cultural gender identity (Ogwudire and Ogunyemi, 2025: 4294).

## 1.2 Why Kurdish Women?

The Kurdish case illuminates multiple dimensions of AI's cultural politics: linguistic representation (Kurdish is a low-resource language in AI training data), visual representation (how AI imagines "Kurdish women" when prompted), political representation (how Kurdish female agency is encoded or erased), and cultural sovereignty (who controls the narratives about Kurdish identity). For Kurdish women, problems of representation are not abstract. They are micro-obstacles in daily life that shape visibility, opportunity, and cultural survival.

## 1.3 Research Questions and Aims

This study addresses three interconnected research questions:

1. How do current AI systems represent, misrepresent, or erase Kurdish women's cultural gender identity?
2. What theoretical frameworks best illuminate the relationship between AI and non-Western gender identity?
3. How are Kurdish women and their allies using AI technologies to challenge dominant narratives and reclaim representational authority?

The study aims to contribute to both the theoretical and empirical aspects of Kurdish women's perspectives. Theoretically, the study bridges critical AI studies with non-Western feminist thought, particularly Kurdish and Middle Eastern gender scholarship. Empirically, it provides detailed analysis of recent research on AI bias across linguistic contexts, case studies of Kurdish AI

<sup>1</sup> MIT: it is a digitally oriented independent media company whose analysis, features, reviews, interviews, and live events explain the commercial, social, and political impact of new technologies.



cultural production, and examination of emergent practices for decolonizing AI representation.

## 2. Theoretical Framework and Literature Review

Understanding the relationship between AI and non-Western women's gender identity requires theoretical tools capable of analyzing multiple, intersecting systems of power. This section synthesizes three complementary frameworks: intersectionality, postcolonial technoscience, and non-Western feminist ethics.

### 2.1 Intersectionality and Algorithmic Systems

Kimberlé Crenshaw's concept of intersectionality, developed to analyze how Black women experience compounded discrimination at the intersection of race and gender, provides essential analytical tools for examining AI's impact on non-Western women. According to Crenshaw "intersectionality reveals that systems of oppression do not operate independently but interact to produce unique experiences of marginalization that cannot be understood by examining gender or culture in isolation" (1989: 145). When applied to AI systems, intersectional analysis asks: How do algorithms simultaneously process gender, ethnicity, language, and geographic location? How do these categories interact in training data, model outputs, and user experiences? For Kurdish women, this means examining how AI systems encode assumptions about "Middle Eastern women" (Orientalist stereotypes), "Kurdish identity" (statelessness and cultural erasure), and "womanhood" (patriarchal norms from both Western and regional sources) simultaneously.

Recent scholarship has extended intersectionality to what might be termed "algorithmic intersectionality", which is "the study of how computational systems create, reinforce, or potentially disrupt intersecting categories of identity" (Birhane, 2021: 6). As one analysis notes, intersectionality enables "in-depth analysis of technology stakeholders' experiences with AI" by revealing how "race, gender, class, sexuality, ability, and more" combine in algorithmic mediation. For Kurdish women, this means attending to how AI systems position them within multiple hierarchies: as women in patriarchal societies, as members of a marginalized ethnic group, as speakers of a low-resource language, as subjects of regional geopolitics, and as participants in global digital culture.

### 2.2 Postcolonial Technoscience and Digital Colonialism

Postcolonial technoscience examines how colonial power relations persist in and through technological systems. The concept of "digital colonialism" has emerged to describe how information technologies "reproduce colonial power relations" through data extraction, cultural imposition, and epistemic





marginalization. Artist and scholar Morehshin Allahyari defines digital colonialism as "a framework for critically examining the tendency for information technologies to be deployed in ways that reproduce colonial power relations" (2023).

According to Mohamed et al, In AI systems, "digital colonialism operates through multiple mechanisms" (2020: 54). Training data overwhelmingly represents Western, English-language sources, rendering non-Western cultures invisible or distorted. Model architectures embed Western assumptions about language, knowledge, and identity. Deployment patterns extract data from the Global South while exporting AI applications designed for Western users. As one study observes, "ethical narratives, perceptions and principles from the global south, particularly Africa, are glaringly missing from the global discussion of AI Ethics" (Boateng et al, 2025: 122). This epistemic injustice extends to Kurdish contexts, where cultural knowledge, linguistic heritage, and "gender identities are processed through systems that lack the conceptual frameworks to understand them" (Birhane, 2021: 7). The coloniality of AI is not merely about representation but about sovereignty—who controls the narratives, who profits from cultural data, who decides what can be said and seen. For stateless nations like the Kurds, this raises profound questions: When Kurdish cultural heritage is digitized, who owns it? When Kurdish women's images are generated by AI trained on Western datasets, who controls their representation? When Kurdish language is processed by models designed for Turkish, Persian, or Arabic, whose grammar and worldview prevails?

### 2.3 Non-Western Feminist Epistemologies

Intersectionality and postcolonial critique must be supplemented by positive frameworks grounded in non-Western feminist thought. Recent scholarship has articulated feminist African ethics as a resource for AI ethics, emphasizing how research can challenge Western individualism in AI design. Similar resources exist in Kurdish, Middle Eastern, and Islamic feminist traditions that have yet to be systematically applied to AI.

Kurdish feminism offers particularly rich resources for reimagining AI's relationship to gender and culture. The Kurdish women's movement, particularly in Rojava (northeast Syria), has developed distinctive theories of "jineology" (women's science) that challenge both Western feminism and regional patriarchy. These frameworks emphasize democratic confederacies, ecological sustainability, and women's liberation as interconnected struggles—perspectives that could fundamentally reshape how AI systems conceptualize gender, community, and social transformation. The concept of "jinn rather than cyborg," articulated by Morehshin Allahyari (2023), exemplifies this



alternative imaginary. Responding to Donna Haraway's famous "Cyborg Manifesto," Allahyari proposes the jinn—a figure from Middle Eastern mythology, "a spirit made of smokeless fire" with agency to choose between good and evil—as a more culturally-grounded figure for thinking about human-technology relations. The jinn, like the cyborg, is a hybrid of human and nonhuman. But unlike the cyborg, the jinn emerge from Islamic and Middle Eastern cosmological traditions, carrying different connotations of agency, embodiment, and relation to the unknown. "You can befriend a jinni, or you can summon a jinni and befriend it, or you can be possessed by a jinni," Allahyari explains. "You can use the power of the jinn to enter or channel yourself into other worlds". Such frameworks suggest that non-Western women's engagement with AI need not be merely defensive—resisting bias and removal—but can be generative: creating new imaginaries, new figures, new possibilities for what AI might become when rooted in different cultural soil.

#### 2.4. AI and Non-Western Women: The Landscape of Bias and Removal

Before examining Kurdish women's specific experiences, it is essential to understand the broader landscape of AI bias affecting non-Western women. This section focuses on recent empirical research on gender and cultural bias in AI systems.

##### 2.4.1 Gendered AI: The Persistence of Stereotype

Research consistently demonstrates that AI systems reproduce and amplify gender stereotypes. A systematic review of gender-related AI studies reveals "significant gender biases in AI models, especially in areas like healthcare diagnostics and hiring processes, where datasets often underrepresent women, leading to skewed outcomes" (Voutyrakou and Skordoulis, 2025: 5490). These biases extend beyond underrepresentation to active stereotyping: AI image generators associate "engineer" with male-presenting figures, "nurse" with female-presenting figures; language models generate text that associates women with domestic roles, men with professional achievement. The concept of "Citational Logic of Algorithmic Mimicry" (CLAM) helps explain this phenomenon (Anonymous, 2025). AI systems do not invent gender representations but rather "cite" patterns present in training data. However, because training data overrepresents certain patterns (male engineers, female caregivers) and underrepresents others, the resulting citations appear "natural" only through statistical reinforcement. CLAM is particularly relevant to understanding how Kurdish women are represented (or erased) in AI systems.



When AI systems "cite" gender performances, they draw primarily from Western datasets. The gender scripts available for "citation" rarely include Kurdish cultural expressions—whether the historical gender fluidity of Qajar-era representations documented by Allahyari (2023), the distinctive politics of the Kurdish women's movement, or everyday Kurdish gender performances. The result is not merely omission but active erasure: the recursive logic of CLAM ensures that what is absent from training data remains absent from AI outputs, and each interaction reinforces that absence as "normal."

At the same time, CLAM explains why Kurdish-language AI outputs may reproduce regional patriarchal norms rather than Western gender ideologies. When the available data for "citation" includes Turkish, Persian, and Arabic sources with their own gender hierarchies, the AI recursively performs those scripts, potentially reinforcing conservative gender norms under the guise of cultural appropriateness (Schelenz, 2025: 8). Eventually, Noble concludes that "when gender is performed by AI, it matters which performances are cited, repeated, and legitimized. The stakes are not just technical but epistemic: What gets encoded as 'normal' in AI systems influences how gender is experienced, negotiated, and understood" (2018: 97).

#### 2.4.2 Cultural Specificity in Gender Bias

Crucially, gender bias in AI is not uniform across cultures. A groundbreaking cross-linguistic study by Voutyrakou and Skordoulis (2025) examining AI-generated definitions of role models across seven languages—English, Greek, Hebrew, Urdu, Somali, Kurdish, and Punjabi—revealed significant cultural variation in how gender bias manifests.

The study found that "in languages spoken in societies with lower gender equality, such as Punjabi, Urdu, Kurdish, and Somali, female role models were more often portrayed with nurturing, moral, and family-oriented traits, while male role models were associated with ambition, authority, and public achievement" (Voutyrakou and Skordoulis, 2025: 5491). By contrast, English and Greek outputs "showed more overlap in the traits attributed to male and female role models, reflecting a more Western approach to gender equality in discourse". This finding has profound implications. It demonstrates that AI systems do not simply impose Western gender norms globally but rather adapt to—and potentially reinforce—local gender ideologies. When a Kurdish-language user queries an AI system about female role models, they receive outputs that reflect and amplify regional patriarchal norms. The AI becomes not a force for gender transformation but a conservative force, reinforcing existing inequalities under the guise of cultural appropriateness. However, the

study also found that "even in these higher-equality contexts, gender bias remained evident, especially in the default assumption of male identity in gender-unspecified prompts" (Ibid: 5492). This suggests that AI systems are neither culturally neutral nor simply Westernizing but rather complexly situated within multiple, sometimes conflicting, gender regimes.

### 2.4.3 The Low-Resource Language Penalty

For Kurdish women, linguistic marginalization compounds gender bias. Kurdish is classified as a "low-resource language" in AI development, meaning it is dramatically underrepresented in training data. Research from Stanford University's Institute for Human-Centered AI documents that "despite these models claiming to be multilingual, their performance in low-resource languages (such as Swahili, Filipino, and Marathi) is far inferior to mainstream high-resource languages, and they are even prone to generating negative stereotypes" (Ogwudire and Ogunyemi, 2025: 4295).

This multilinguality curse means that Kurdish speakers using AI systems receive lower-quality outputs, more frequent errors, and greater stereotyping than users of high-resource languages like English or Turkish. According to Najmabadi "the problem is not merely technical but structural as currently there are about 7,000 languages in the world, but less than 5% are effectively represented on the internet" (2005: 139). As a result, the resource scarcity is not just a data problem, but a socially rooted issue. For Kurdish women, this linguistic marginalization intersects with gender bias in specific ways. When AI systems do attempt to generate Kurdish-language content, they often draw on Turkish, Persian, or Arabic training data—languages of dominant cultures with histories of Kurdish oppression. The resulting outputs may encode not only generic gender bias but specifically the gender ideologies of dominant cultures, further eroding Kurdish cultural specificity.

### 2.4.4 Visual Removal and Stereotype

Image generation systems present another dimension of representational crisis. Studies of AI image generators reveal systematic patterns of cultural and gender stereotyping. For example, when it is asked to generate an image of an African village, systems generate thatched huts and barefoot children, but when asked to present a European scientist, they generate white men in lab coats. These visual biases have been directly adopted by some school textbooks and startup websites without scrutiny, further reinforcing one-dimensional imaginations of other cultures. For Middle Eastern and Kurdish contexts, visual



AI often draws on Orientalist tropes: veiled women, desert landscapes, archaic imagery. Allahyari states that when she attempted to generate images based on Qajar dynasty portraiture—a period in Iranian history when gender presentation was significantly more fluid than today- she would never arrive at a Qajar painting, because “it does not have enough of that material to pull from” (2023). The AI's training data, dominated by Western art historical canons, lacked the cultural specificity to understand non-Western gender fluidity.

#### 2.4.5 Geographic Imbalance in Research

Finally, the very study of AI and gender exhibits geographic bias. A systematic review by Schelenz found "a notable geographic imbalance, as the research tends to be focused on Western contexts, with underrepresentation of studies from developing regions" (2025: 7). This means that the experiences of non-Western women with AI are not only marginalized in the technology itself but in the scholarly literature that might document and address that marginalization.

The Kurdish case exemplifies this gap. Despite significant Kurdish engagement with AI—from cultural production to political organizing to linguistic preservation—there is virtually no academic literature examining Kurdish women's relationship to AI. This study begins to address that gap, but much more research is needed.

#### 2.5 Kurdish Women and AI: Case Studies in Representation and Resistance

Having established the broader landscape of AI bias affecting non-Western women, this section examines specific cases of Kurdish engagement with AI technologies. These cases reveal both the challenges of representation and the possibilities for reclaiming AI as a tool for cultural sovereignty. As AI systems become ever more pervasive, the question of who they represent and how becomes ever more urgent. For Kurdish women, this is not an abstract question but a matter of daily experience—of visibility and invisibility, of being seen or erased, of having one's voice heard or ignored. The figure of the jinn, proposed by Morehshin Allahyari as an alternative to the cyborg, offers a suggestive way to think about these stakes. The jinn are a being of smokeless fire, neither angel nor devil, with agency to choose. It can be befriended or summoned, but it can also possess. It belongs to a cosmology in which humans are not the only intelligent beings, not the only agents, not the only ones with something to say.

From Kurdish women's perspectives AI is encountered as something like a jinni. It is powerful but not all-powerful. It can be engaged but not fully controlled. It carries risks—of possession, of distortion, of loss—but also possibilities—of friendship, of summoning, of entering other worlds. How Kurdish women navigate this relation, how they shape it and are shaped by it, will matter not only for Kurds but for all of us who have to learn to live with intelligences not our own.

### 2.5.1 Zozan C: The First Kurdish AI Singer

In 2025, the first Kurdish AI singer, Zozan C, emerged as a striking intervention in both Kurdish cultural production and AI representation. Created by Bijar Koban, a Kurdish professional with a master's degree in Kurdish language and background in news production, Zozan C represents a deliberate attempt to use AI to challenge stereotypes and expand Kurdish visibility. The project emerged from what Koban describes as a "deeply ingrained perception" he had struggled with for years: "the strange idea that 'she couldn't speak Kurdish'" Koban (2025). This assumption, he explains, "affects not only aesthetics but also the public visibility of the language itself." Koban imagined "a character who embodied a Kurdish identity shaped by city life—one rooted in art, intellectual engagement, and everyday elegance". Zozan C is thus explicitly framed as a response to "problems of representation, visibility barriers, micro-obstacles in daily life" that Koban has lived with since childhood. The name "Zozan" means "highland" in Kurdish, "evoking memories of childhood, village life, and shepherding". Koban explains, "I'm attached to 'Zozan'; it's a name that's in harmony with the geography." This naming connects the AI creation to Kurdish land, memory, and identity—anchoring a digital entity in specific cultural and geographical referents. The voice and imagery draw on influences such as Rewşan, a Kurdish singer known for powerful vocal performance, but Zozan C is not merely imitative. Koban emphasizes that the project is "about making the voice of Kurdish women heard louder in public spaces with each new interpretation". Creating Zozan C requires meticulous, time-intensive work. Koban uploads verses by renowned Kurdish poet Cegerxwîn and crafts detailed prompts to guide the AI. He states that "artificial intelligence is not as 'intelligent' as we think; it needs guidance" (2015). His prompts emphasize "the traditional singer, Kurdish motifs, and the preservation of melodic and lyrical spirit". The goal is not to replace Kurdish cultural tradition but to "update with respect—pruning the branches without cutting the roots". Modernisation, for Koban, is "about dialogue rather than rupture" (2025).



Koban states that copyright presents significant obstacles and that "fragmented archives and unclear ownership make AI production particularly complex," (2015). Some works had to be removed because rights holders were not comfortable with AI use. Navigating these risks requires reliance on original poems and compositions. This highlights a broader tension: Kurdish cultural heritage, much of it orally transmitted or held in precarious archives, is particularly vulnerable to appropriation or erasure in AI systems.

Zozan C represents a form of what might be called "algorithmic self-determination" (Koban, 2025). Rather than awaiting representation by Western or even regional AI systems, Kurdish creators are using AI tools to represent themselves. The project demonstrates that AI can be a medium for cultural preservation and innovation, not merely a source of bias and erasure. As Koban reflects, "Artificial intelligence and new media are taking the struggle for representation to a new level," offering audiences "not just spectatorship but a sense of co-creation".

### 2.5.2 Morehshin Allahyari: Jinn, Queerness, and Algorithmic Repair

Iranian-Kurdish artist Morehshin Allahyari has produced a substantial body of work examining the intersection of technology, colonialism, and Middle Eastern identity. Two projects are particularly relevant to understanding Kurdish women's relationship to AI.

Moon-Faced (2022): This project uses AI models trained on Qajar dynasty portraiture to "generate genderless portraits and recover queer forms of representation that precede the influence of European visual culture". Allahyari was drawn to the Qajar period because "definitions of beauty for men, women—they were very different" from contemporary norms. The term "moon-faced" was used for men and women as a way to define the beauty of both. Qajar paintings often depict figures whose gender is ambiguous, because "there are a lot of portraits where you don't know if there are two women, if they're a man and a woman, if they're two men" (Allahyari, 2023).

Allahyari's intervention uses AI to recover this pre-colonial gender fluidity. She documents how, during the late Qajar period, "the introduction of camera technology to Iran" and increasing Westernization led to a shift: representations became "more distinct in terms of 'this is a man,' 'this is a woman'". Her AI project attempts to "collaborate with this machine to undo and repair this history of Westernization" (Allahyari, 2023). However, Allahyari is acutely aware of the paradox: she is using an AI system "that itself is very dominated by Western data and Western history" to critique Westernization. The system's training data, "from the data to the material it pulls from visually, the archives that it uses obviously are dominated by the Global North". Without feeding it

specific Qajar images, "it would never arrive at a Qajar painting." This requires what Allahyari describes as a process of mutual training: "For me to train this AI, we were training each other, almost" (Allahyari, 2023).

*She Who Sees the Unknown* (2017-2021): This project uses 3D modeling to visualize "monstrous feminine and/or queer figures of West Asian origin". Figures include Huma, "a demon with three heads and a tail, who summons fevers," and the Laughing Snake, "a serpent-like figure of immense power who's ultimately undone by her own uncontrolled laughter at seeing her image in a mirror". Allahyari frames the laughing snake as "an avatar for hysteria, gendered morality, and the experience of 'living in a female body in the Middle East'" (Allahyari, 2023). The project emerged from Allahyari's observation that Middle Eastern mythology predominantly features male figures. She sought figures that did not fit into this one gender representation" and became interested in jinn with agency to choose between good and evil; unlike angels (who obey) or devils (who disobey).

Allahyari's proposition to be "a jinn rather than a cyborg" offers a profound reframing of AI's relationship to non-Western identity. The jinn, like the cyborg, is hybrid. But the jinn emerge from Islamic cosmological traditions, carries different connotations of agency and relation to the unknown, and suggests different possibilities for human-technology relations. Allahyari states that "you can befriend a jinni, or you can summon a jinni and befriend it, or you can be possessed by a jinni. You can use the power of the jinn to enter or channel yourself into other worlds" (Allahyari, 2023). This framing positions AI not as a tool to be mastered but as a spirit to be engaged—with all the risks and possibilities that entails.

### 2.5.3 Linguistic Resistance: Kurdish in AI Systems

Beyond individual artistic projects, Kurdish communities are engaging with AI at the level of language preservation and development. Kurdish is not a single language but a group of dialects, primarily Kurmanji and Sorani, with millions of speakers but limited digital presence. The development of Kurdish-language AI capabilities is itself a form of cultural resistance.

Recent research on AI bias across languages has included Kurdish in its analysis, providing empirical evidence of how Kurdish-language AI outputs differ from those in high-resource languages. This research enables Kurdish communities to document and challenge specific biases affecting Kurdish-language users. It also provides data for developing more equitable systems.

The challenges are substantial. Kurdish lacks the large-scale digitized corpora that enable high-quality AI performance in English or even Turkish. Kurdish



script varies across regions (Latin-based in Turkey and Syria, Arabic-based in Iraq and Iran). Kurdish speakers are distributed across multiple nation-states with varying policies toward Kurdish language and culture. These factors combine to make Kurdish a "low-resource language" in AI development, with all the attendant risks of lower-quality outputs and greater stereotyping.

Yet Kurdish AI development has generated creative responses. Projects like Zozan C demonstrate that AI can be used to generate Kurdish-language cultural content even without massive training corpora. The "guidance" that Koban provides—careful prompting, attention to cultural specificity, iterative refinement—suggests that Kurdish AI might develop along different paths than the data-hungry models dominant in the Global North.

## 2.6 Diaspora and Digital Sovereignty

The Kurdish diaspora plays a crucial role in these developments. Koban, based in Australia, created Zozan C from outside the Kurdish homeland. Allahyari, based in New York, engages with Iranian-Kurdish heritage from the diaspora. This diasporic positioning enables forms of cultural production that might be impossible within the constraints of Turkey, Iran, Iraq, or Syria, where Kurdish cultural expression faces varying degrees of restriction.

Diasporic Kurdish AI engagement also raises questions about digital sovereignty. When Kurdish cultural heritage is digitized and processed through AI systems, who controls it? When Kurdish-language data is used to train models, who benefits? These questions echo broader debates about data sovereignty for Indigenous and marginalized communities. They suggest the need for what might be called "culturally-sovereign AI"—AI systems developed with, by, and for specific communities, accountable to those communities rather than to corporate or state actors.

## 3. Data and Methodology

This study employs a qualitative, interdisciplinary methodology integrating critical discourse analysis, thematic analysis, and theoretical frameworks across multiple data sources. By examining scholarly literature, empirical studies of AI bias, and case studies of Kurdish AI cultural production through intersectional, postcolonial, and non-Western feminist frameworks, the research aims to generate both empirical insights into Kurdish women's experiences with AI and theoretical resources for reimagining AI's relationship to cultural gender identity. The methodology reflects feminist commitments to situated knowledge, reflexivity, and accountability, while acknowledging limitations in scope and the rapidly evolving nature of AI technologies.



### 3.1 Research Design

This research adopts a qualitative case study approach, with Kurdish women as the central case through which to examine broader dynamics of AI and non-Western gender identity. The case study methodology is particularly appropriate for this investigation for several reasons Yin (2018) argues that case studies are well-suited to research that seeks to understand complex contemporary phenomena within their real-world contexts. This is precisely relevant to the situation of Kurdish women navigating AI systems across multiple national and digital contexts. In addition, case study approach enables the "thick description" (Geertz, 1973: 175) which is necessary to capture the specificity of Kurdish cultural experiences while also illuminating patterns that may extend to other marginalized communities. Eventually, the feminist methodologies emphasize the value of situated knowledge and particularity over false universals; the case study approach aligns with this commitment by attending closely to Kurdish women's specific experiences rather than subsuming them into generalized claims about non-Western women. The research is designed as an instrumental case study wherein the Kurdish case serves to illuminate broader questions about AI, gender, and cultural representation.

### 3.2 Data Sources and Analytical Framework

#### 3.2.1 Data Sources

A central component of this research is the in-depth examination of specific cases where Kurdish creators and artists have engaged with AI technologies. Two primary cases were selected for detailed analysis:

**Case 1: Zozan C—The First Kurdish AI Singer:** This case examines the creation of Zozan C, a Kurdish AI singer developed by Bijar Koban in 2025.

**Case 2: Morehshin Allahyari's Artistic Interventions:** This case examines two interconnected projects by Iranian-Kurdish artist Morehshin Allahyari:

- *Moon-Faced* (2022): An AI project trained on Qajar dynasty portraiture to recover pre-colonial gender fluidity
- *She Who Sees the Unknown* (2017-2021): A 3D modeling project visualizing monstrous feminine and queer figures from West Asian mythology



Data sources include Allahyari's published interview "A Jinn Rather Than a Cyborg" (2023), documentation of the artworks, artist statements, and critical reception of the work. Allahyari's explicit framing of her practice in relation to both technology and Middle Eastern cultural traditions makes this case particularly valuable for understanding how Kurdish and Iranian creators are reimagining AI's cultural possibilities. These cases were selected through purposive sampling, seeking information-rich examples that illuminate the research questions.

### 3.2.2 Selection criteria

The data selection criteria in this study included: (1) explicit engagement with AI technologies by Kurdish creators, (2) relevance to questions of gender and cultural representation, (3) availability of detailed documentation, and (4) diversity of approach (music vs. visual art, diaspora vs. homeland positioning, different Kurdish sub-identities).

### 3.3 Analytical Framework

Data analysis proceeded through a thematic analysis guided by the research questions. The thematic analysis is particularly suited to examining how AI systems and discourses about AI reproduce or challenge power relations, including gender and cultural hierarchies. Thematic analysis (Braun & Clarke, 2021) was used to identify, analyze, and report patterns across the data sources. Key themes identified through this process include: algorithmic double erasure, cultural specificity of gender bias, AI as medium for cultural sovereignty, and jinn figuration as alternative imaginary. The thematic analysis is backed by a postcolonial analysis of the data sources to find out how AI systems perpetuate colonial patterns of knowledge extraction and representation and the epistemic injustice in how non-Western knowledge is processed through Western-designed systems

## 4. Results and Discussions:

The cases examined in this study reveal both the profound challenges facing non-Western women in AI systems and the emergent possibilities for reclaiming AI as a tool for cultural sovereignty. This section discusses implications for theory, practice, and policy.

### 4.1 Theoretical Implications

#### 4.1.1 Intersectionality and AI:



The Kurdish case confirms the necessity of intersectional analysis for understanding AI's impact on marginalized communities. Kurdish women are not simply "women" in AI systems, nor simply "Kurds," but subjects positioned at the intersection of multiple, interacting systems of marginalization. Gender bias in Kurdish-language AI outputs is not generic but specifically inflected by regional gender ideologies. Cultural erasure is not abstract but manifests in particular ways: the absence of Kurdish from training data, the dominance of Turkish and Persian in regional AI development, the Orientalist visual tropes that shape image generation. However, the Kurdish case also reveals limitations of intersectionality as typically applied. Intersectionality emerged from US Black feminist thought and carries specific historical and geographical specificities. Applying it to Kurdish contexts requires attention to different histories of colonialism, different configurations of race and ethnicity, different relationships to religion and secularism. As one analysis notes, Black feminism offers powerful tools but also "shows some limitations in critically studying AI: first, while BF focuses successfully on power systems, these are mostly limited to gender, race, and class". Kurdish marginalization involves additional dimensions—statelessness, linguistic erasure, regional geopolitics—that require theoretical expansion.

#### 4.1.2 Digital Colonialism and Its Limits:

The concept of digital colonialism illuminates important dimensions of Kurdish experience with AI. The extraction of Kurdish cultural data, the imposition of Western and regional gender norms through AI systems, the marginalization of Kurdish language in training data—these can all be understood through a colonial framework. However, the Kurdish case also suggests limits to the colonial analogy. Kurds are not simply passive victims of digital colonialism but active agents using AI for cultural preservation and innovation. Projects like Zozan C demonstrate that AI can be a medium for resistance, not merely domination. Moreover, the colonial framework may obscure the complex position of Kurdish communities as both marginalized by global tech companies and positioned as "local" or "regional" actors in ways that complicate simple center-periphery models. Kurdish AI engagement occurs in relation to multiple centers of power: US tech companies, European regulators, regional states (Turkey, Iran, Iraq, Syria), and diaspora communities. This multi-sited field requires more nuanced analysis than the colonial binary allows.

#### 4.1.3 Non-Western Feminist Futures:



The most generative theoretical resource for Kurdish women's AI engagement may be non-Western feminist thought itself. The concept of "jinn rather than cyborg" exemplifies this possibility. Rather than simply applying Western feminist frameworks to Kurdish contexts, Allahyari draws on Middle Eastern cosmological traditions to imagine different relationships between humans, technology, and the unknown. The jinn are not a figure of mastery but of relation—to be befriended, summoned, perhaps even possessed by. This suggests AI not as a tool to be controlled but as an intelligence to be engaged, with all the risks and possibilities that entails.

Similarly, Kurdish feminist frameworks like jineology could inform AI development in distinctive ways. Jineology's emphasis on democratic confederalism might suggest AI systems designed for collective, participatory governance rather than individual optimization. Its ecological commitments might inform sustainable AI development that centers environmental justice alongside gender justice. Its critique of state-centric politics might inform approaches to AI governance that empower stateless nations like the Kurds rather than reinforcing existing state structures.

## 4.2 Practical Pathways

### 4.2.1 Data Sovereignty:

Kurdish communities need control over Kurdish cultural data used in AI training. This includes digitized archives of Kurdish literature, music, and oral tradition; corpora of Kurdish-language text for training language models; and images and recordings that represent Kurdish visual and sonic culture. Data sovereignty means not merely ownership but governance: communities should determine how their data is used, by whom, and for what purposes. This requires infrastructure. Kurdish communities need digital archives, metadata standards, and governance structures that enable collective control over cultural heritage. They need legal frameworks that recognize collective, not merely individual, rights to cultural data. They need technical capacity to participate in AI development rather than merely supplying raw data for extraction by tech companies.

### 4.2.2 Capacity Building:

Kurdish AI development requires Kurdish AI developers. This means education and training in AI technologies, but also in AI ethics, policy, and governance. It means supporting Kurdish researchers to conduct AI research in Kurdish contexts, with Kurdish data, for Kurdish communities. It means building institutions—research centers, educational programs, community organizations—that can sustain Kurdish AI engagement over the long term.

Diaspora communities have crucial roles to play. Kurds in Europe, North America, and Australia often have access to educational and professional opportunities unavailable in the homeland. Building networks that connect diasporic expertise with homeland needs could accelerate Kurdish AI capacity while maintaining accountability to Kurdish communities.

#### 4.2.3 Participatory Design:

AI systems for Kurdish communities should be designed with Kurdish communities, not for them. This means participatory processes that engage diverse stakeholders: women, youth, elders, rural and urban communities, speakers of different Kurdish dialects. It means designing AI that responds to community-identified needs rather than corporate or state priorities.

Projects like Zozan C exemplify this approach. Koban's deep engagement with Kurdish language and culture, his attention to community reception ("Most loved it on the second listen"), his commitment to "updating with respect" rather than rupture—these demonstrate what participatory, culturally-grounded AI development might look like.

#### 4.3 Policy Implications

##### 4.3.1 Linguistic Equity:

Policymakers should address the systematic underrepresentation of low-resource languages in AI training data. This requires investment in digitizing and curating linguistic corpora for languages like Kurdish. It requires technical research on multilingual AI that performs equitably across languages rather than optimizing for English at the expense of others. It may require regulatory frameworks that require AI systems deployed in multilingual contexts to meet minimum performance standards across all relevant languages. The European Union's AI Act, which requires "high-risk" AI systems to undergo conformity assessments including review of "non-discrimination and fundamental rights impacts," could provide a model. However, such frameworks must be extended to address linguistic discrimination specifically, not merely generic non-discrimination requirements.

##### 4.3.2 Cultural Representation:

Policymakers should address systematic biases in how AI represents non-Western cultures. This requires diversity in AI development teams, currently dominated by "white men" and lacking representation from marginalized communities. It requires testing AI systems for cultural bias using diverse evaluation datasets. It may require transparency requirements that enable researchers and communities to audit AI systems for cultural representation.



Initiatives like the SHADES project, which "has become an important tool for multiple companies to detect and correct cultural biases in AI models," demonstrate what is possible. However, such initiatives must be scaled and mandated, not left to voluntary corporate action.

#### 4.3.3 Gender Justice:

Policies addressing gender bias in AI must attend to cultural specificity. Generic gender equity frameworks may miss how gender bias operates differently across linguistic and cultural contexts. The finding that Kurdish-language AI outputs reflect different gender ideologies than English-language outputs suggests that interventions must be culturally-grounded, not one-size-fits-all. This requires developing gender equity metrics that work across cultures. It requires engaging local feminist movements in defining what gender justice means in specific contexts. It requires recognizing that gender transformation may look different in different cultural settings, without abandoning commitments to women's liberation.

#### 5. Conclusion

This study has examined the intersection of artificial intelligence and cultural gender identity through the lens of Kurdish women. The findings reveal a complex landscape of marginalization and possibility.

First, AI systems consistently reproduce and amplify gender biases, but these biases are not uniform across cultures. Kurdish-language AI outputs reflect regional gender ideologies that associate women with nurturing roles and men with public achievement, potentially reinforcing patriarchal norms under the guise of cultural appropriateness.

Second, Kurdish women face specific forms of cultural erasure in AI systems. Kurdish is a low-resource language, underrepresented in training data, leading to lower-quality outputs and greater stereotyping. Visual AI systems lack the cultural knowledge to represent Kurdish identity accurately, defaulting to Orientalist tropes or generic "Middle Eastern" imagery.

Third, despite these challenges, Kurdish creators are using AI for cultural preservation, innovation, and resistance. Projects like Zozan C demonstrate that AI can be a medium for Kurdish linguistic and musical expression, challenging stereotypes and expanding visibility. Artistic interventions like Morehshin Allahyari's work recover pre-colonial gender fluidity and propose culturally-grounded frameworks for human-AI relations.

Eventually, these developments suggest pathways toward what this study has termed culturally-sovereign AI. That is AI systems developed with, by, and for specific communities, accountable to those communities rather than to corporate or state actors. Achieving this requires data sovereignty, capacity building, participatory design, and supportive policy frameworks.

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