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TOO MUCH, TOO FAST: UNDERSTANDING AI FATIGUE IN THE DIGITAL ACCELERATION ERA

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Abstract

As artificial intelligence (AI) becomes deeply embedded in work, education, and everyday decision-making, a growing psychosocial challenge has emerged: AI fatigue. This paper conceptualises AI fatigue as a multidimensional condition arising from the interplay of technostress, cognitive overload, and emotional exhaustion, driven not only by constant AI use but also by the relentless pace, opacity, and unevenness of AI integration. Drawing on Technostress Theory and Cognitive Load Theory, the study differentiates AI fatigue from broader digital burnout while highlighting their intersections in cognitive, emotional, and organisational domains. Using a narrative literature review with thematic synthesis, the paper identifies key drivers of AI fatigue, including poor design, ethical opacity, organisational misalignment, and structural inequality. It argues that AI fatigue is not merely an individual adaptation issue but a systemic outcome of current digital transformation practices. To address this emerging condition, the paper outlines strategies for human-centred AI design, policy safeguards, and organisational wellbeing interventions, advocating a shift from productivity-first to psychological sustainability-first approaches. The study concludes by calling for empirical, longitudinal, and cross-sector research to better understand and mitigate AI fatigue as a structural feature of life in the algorithmic era.

Keywords

AI Fatigue, Technostress, Cognitive Overload, Digital Burnout, Artificial Intelligence

Introduction

In her seminal book *Alone Together: Why We Expect More from Technology and Less from Each Other* (2011), Sherry Turkle explores the paradox of digital connection, how our growing dependence on technology, particularly intelligent machines, simultaneously connects and isolates us. Turkle argues that as we delegate more of our cognitive and emotional labour to devices, we risk diminishing the very human capacities that once made those tasks meaningful. More than a decade later, her warnings feel increasingly prophetic. The rapid integration of artificial intelligence (AI) into daily life across work, education, healthcare, and even personal relationships has ushered in a new era of convenience, but also of cognitive strain and emotional exhaustion. This phenomenon, which we refer to as AI fatigue, emerges not only from overexposure to intelligent systems but also from the pace, scale, and opacity of technological change itself. This tension is reflected in findings from the 2024 EY Global Artificial Intelligence Survey, which reveals a growing disconnect between the strategic optimism of senior leaders and the emotional reality of their workforces. While 95% of organisations surveyed are actively investing in AI and many reports strong returns across productivity, innovation, and efficiency, over half (53%) of leaders acknowledge that employees feel overwhelmed by the relentless pace of transformation. A further 50% report a decline in enthusiasm for AI initiatives despite positive performance metrics, suggesting that Return on Investment (ROI) alone cannot offset the psychological costs of navigating AI-driven disruption (EY, 2024).

AI fatigue is not reducible to mere workload. It is, instead, a complex form of technostress (Tarafdar et al., 2007) and cognitive overload (Sweller, 1988), characterised by saturation, decision paralysis, and a subtle erosion of human agency. Defined as the exhaustion or overwhelm triggered by constant interaction with AI-driven tools and the relentless pressure to adapt, AI fatigue reflects a broader digital malaise that cuts across sectors, professions, and age groups (Niche Capital, 2025; Shanmugasundaram & Tamilarasu, 2023). At its core are

overlapping stressors: the expectation to continuously learn new platforms, process vast volumes of AI-generated content, manage ethical ambiguities, and remain productive in algorithmically turbulent environments. Recent scholarship suggests this fatigue arises from more than just personal adaptation struggles. It is increasingly systemic. According to Arnold *et al.* (2023), information overload has become one of the most widely reported stressors in digitally intensive work environments, strongly linked to burnout, disengagement, and poor decision quality. Similarly, Rasool *et al.* (2022) describe how AI technologies, while designed to improve efficiency, frequently result in "technology overload", a condition characterised by continual interruption, loss of work-life boundaries, and increased emotional strain. The problem, as Kim and Lee (2024) argue, is not simply the presence of AI but its unmanaged integration: AI adoption increases job stress, which in turn mediates burnout, especially when workers lack self-efficacy in navigating AI systems.

Even so-called generative AI, while celebrated for creative breakthroughs, does not escape this paradox. Chuang *et al.* (2025) show that although generative AI can enhance productivity and engagement, it simultaneously contributes to technostress, especially when users feel uncertain, surveilled, or displaced by the technology. In this way, AI fatigue reflects what Goyal (2023) terms the "AI Renaissance": a period of rapid human-machine convergence that redefines decision-making and cognition but also amplifies emotional and informational pressures. This paper explores AI fatigue as a psychosocial phenomenon, examining its cognitive, emotional, and organisational drivers. Framing the issue within technostress theory and Cognitive Load Theory, the study aims to move beyond superficial diagnostics to consider how AI fatigue functions as a structural challenge in contemporary sociotechnical systems. As we will argue, understanding this condition requires acknowledging not only the technological causes but also the design, policy, and inequality contexts that shape how AI is experienced on the ground.

Technostress and Cognitive Overload in the Age of AI

The phenomenon of AI fatigue is best understood at the intersection of technostress theory and cognitive load theory (CLT), two frameworks that offer critical insights into how technology-induced demands compromise mental well-being and functional performance. Technostress, as first conceptualised by Brod (1984), refers to the stress individuals experience when they are unable to cope with new information technologies in a healthy manner. More recent elaborations by Tarafdar *et al.* (2007) identify five key dimensions of technostress that are particularly intensified in AI-saturated environments: *techno-overload* (the demand to work faster and longer), *techno-invasion* (the blurring of boundaries between work and personal life), *techno-complexity* (the cognitive difficulty of mastering new systems), *techno-insecurity* (fear of job loss due to automation), and *techno-uncertainty* (the strain of continuous updates and upgrades). Empirical reviews show that these stressors often co-occur and are exacerbated by the rapid, opaque deployment of AI systems that demand constant user adaptation and upskilling (Rasool *et al.*, 2022; Ayyash, 2022). Workers report emotional exhaustion, reduced job satisfaction, and growing mistrust in digital infrastructures, all characteristics of what Kim and Lee (2024) describe as AI-driven burnout. Furthermore, technostress is not merely a byproduct of technology use but a structural condition shaped by poor implementation practices, limited participatory design, and a lack of psychological safety in AI integration efforts.

Complementing this psychosocial lens is Cognitive Load Theory (CLT), developed by Sweller (1988), which asserts that human working memory has a limited capacity for processing information, especially under conditions of novelty or stress. CLT differentiates between *intrinsic load* (inherent complexity of the task), *extraneous load* (how information is presented), and *germane load* (mental effort devoted to learning and schema formation). In AI-driven work environments, these loads often spike simultaneously. As Shanmugasundaram and Tamilarasu (2023) argue, the rapid proliferation of AI interfaces, tools, and alerts creates a constant state of *attentional fragmentation* and *continuous partial attention*. Users must toggle between dashboards, process algorithmic outputs, and make real-time decisions, leading to elevated extraneous and intrinsic loads that hinder deep engagement and memory retention. This is further compounded by an "always-on" digital culture, where the fear of falling behind fuels multitasking and disrupts cognitive recovery. According to Arnold *et al.* (2023), such conditions not only impair decision-making and increase error rates but are closely associated with burnout and disengagement, particularly in knowledge-intensive sectors. The convergence of technostress and cognitive overload explains why AI fatigue is experienced not just as overwork, but as *cognitive saturation* and *psychological depletion*, a condition in which users feel unable to learn, trust, or meaningfully engage with the systems that increasingly mediate their work and lives.

Methodology

This study adopts a qualitative, secondary research design to explore the phenomenon of AI fatigue. The objective was to synthesise existing empirical and theoretical literature from multidisciplinary sources to build a comprehensive, conceptually grounded account of AI fatigue and its intersections with digital burnout. A narrative literature review with thematic synthesis was employed. This approach was chosen because the topic is still

emerging, with limited primary studies but a rapidly growing body of conceptual, empirical, and industry-focused work across psychology, human-computer interaction, organisational studies, and technology ethics. Sources were identified through systematic searches of academic and professional databases, including Google Scholar, Scopus, ResearchGate, PubMed and IEEE Xplore. To ensure practitioner insights were captured, targeted searches were also conducted on reputable organisational and industry platforms. Search keywords included "AI fatigue", artificial intelligence burnout", technostress", "digital burnout", "generative AI stress". The paper included published peer-reviewed journal articles, conference papers, industry reports, and policy briefs from 2017 to 2025 to capture developments from early AI integration through to the current generative AI era, as well as studies focused solely on technical AI, technology, or digital performance without discussion of human impact. Findings were discussed thematically into core themes as c*ognitive overload, emotional exhaustion, organisational drivers, ethical opacity, and structural inequality*. This synthesis provided the conceptual scaffolding for the discussion and recommendations sections. As a secondary research study, the analysis is contingent on the quality, availability, and scope of existing literature. Given the novelty of the topic, much of the evidence is conceptual or based on small-scale studies, with potential publication bias towards negative impacts of AI. These limitations reinforce the need for future empirical, longitudinal, and cross-cultural research to validate and extend these findings.

Understanding AI Fatigue: Intersections Between AI Fatigue and Digital Burnout

In this paper, we attempt to develop a grounded understanding of AI fatigue, but we do so in conversation with the broader concept of digital burnout. The two are inextricably linked: they share technological roots, overlapping symptoms, and a common cultural backdrop of accelerated change and digital immersion. Indeed, we position AI fatigue not as entirely separate from digital burnout, but as an *emergent sub-condition* within it, shaped by specific exposures to artificial intelligence and its discourses. Our framework draws from lived experiences and everyday observations within workplaces and social environments, where people express growing exhaustion, not only from using AI tools but from hearing about them, adjusting to them, or feeling left behind by them. This conceptual model (Figure 1) visualises the intersection between AI fatigue and digital, identifying both distinct and shared stress domains. The AI fatigue dimension is marked by saturation with AI technologies and discourses: individuals report feeling tired of using AI tools, irritated by endless AI content, and frustrated by both the hype and the hesitance surrounding AI. These symptoms speak to a broader cognitive-emotional overload, driven by the pressure to constantly adapt to "smart" systems that are often poorly explained or prematurely deployed. Conversely, the digital burnout dimension encompasses well-documented symptoms of online exhaustion, such as extended screen time, unstructured work hours, video call fatigue, and the collapse of work-life boundaries. These manifestations are rooted in technostress and align with existing scholarship on digital fatigue and remote work overload (Tarafdar *et al*., 2007; Rasool *et al.*, 2022). While digital burnout is not inherently AI-specific, the rise of AI-enhanced tools and performance tracking systems has compounded these pressures, contributing to what some users describe as a new quality of mental weariness. Ruddy (2017) supports this argument that digital burnout has become more complex due to technological overuse, particularly digital devices. Her study found that anticipatory stress from after-hours email expectations contributed to chronic exhaustion and digital burnout (Ruddy, 2017). This paradox echoes findings from Silva *et al.* (2024), who demonstrated that digital burnout, rather than reducing digital engagement, may actually *increase* online shopping frequency as a coping mechanism. Their study challenges assumptions about digital fatigue leading to withdrawal and instead highlights how utilitarian motivations and internet dependency may sustain digitally mediated behaviours. These dynamics affirm that digital burnout and, by extension, AI fatigue are not merely a matter of digital avoidance but of entrenched behavioural loops in technology use. Supporting this link, Göldağ (2022) found a moderately positive correlation between digital burnout and perceived stress among university students, with higher burnout reported among females and smartphone users and strongly associated with increased online time. Savić (2023, p. 95) points out that the "symptoms of this condition are apathy, indifference, or mental exhaustion arising from exposure to too much information... sabotaging our concentration and undermining our immune system". At the centre of the model lies a shared zone of overload, change fatigue and motivational depletion. Here, the stressors of AI fatigue and digital burnout converge, revealing a psychosocial terrain in which people feel overworked, constantly adapting, and increasingly alienated from their tools. This conceptual intersection affirms that AI fatigue should not be viewed in isolation, but as part of a continuum of digitally mediated stress conditions. Recognising this overlap allows for a more integrated approach to mitigation, one that draws from both AI ethics and occupational health, from UX design and wellbeing policy. Most importantly, it underscores the need to address the emotional, cognitive, and relational costs of life in algorithmic environments.

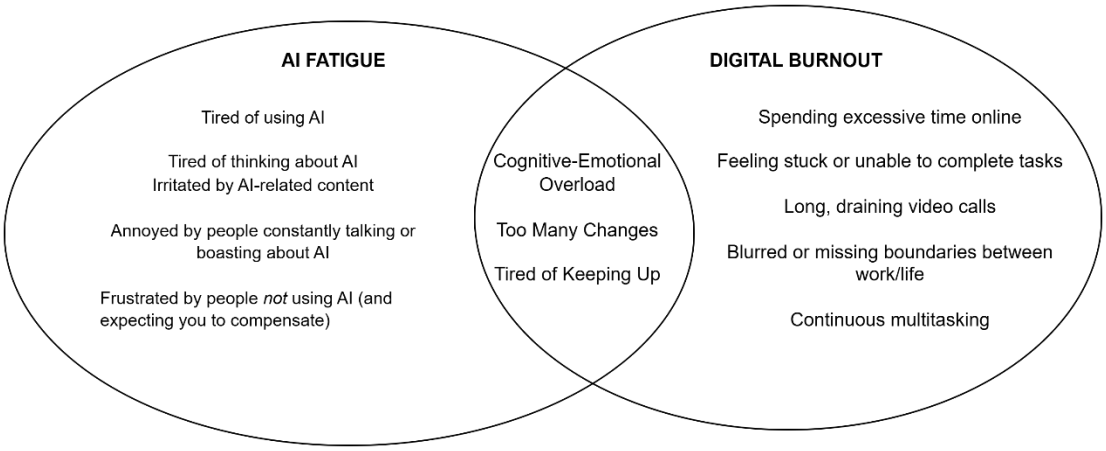

Figure 1: AI Fatigue and Digital Burnout

Figure 1 illustrates the conceptual relationship between AI fatigue and digital burnout. While each has unique triggers, AI saturation in the former and digital work demands in the latter, they intersect in a shared experience of cognitive overload, emotional exhaustion, and reduced psychological resilience. This framework helps clarify how overlapping digital stressors compound fatigue in the modern workplace and online environments.

Manifestations and Drivers of AI Fatigue: How AI Fatigue Feels and Why It Happens

Cognitive and Emotional Manifestations of AI Fatigue

The experience of AI fatigue is not only operational but deeply cognitive and emotional. At the neurological level, fatigue manifests as attention fragmentation, decreased memory retention, and continuous partial attention, a state in which users are perpetually engaged but rarely focused (Shanmugasundaram & Tamilarasu, 2023). Similar to the cognitive overload described by Shanmugasundaram & Tamilarasu (2023), Ruddy (2017) identified reduced concentration and multitasking strain among highly educated professionals as hallmarks of digital burnout. In environments flooded with notifications, dashboards, and AI-driven prompts, the human brain struggles to distinguish between urgent and peripheral stimuli. This constant switching between fragmented tasks reduces deep learning, impairs decision-making, and ultimately compromises the user's sense of mastery and control. Emotionally, AI fatigue frequently results in burnout, frustration, and psychological detachment.

According to Kim and Lee (2024), workers navigating AI-integrated systems often experience heightened stress not just due to workload, but from a perceived loss of agency. Their findings reveal that AI adoption significantly elevates job stress, which in turn mediates emotional exhaustion. Crucially, this stress is not mitigated merely by improved outcomes; in many cases, employees report feeling *less satisfied* with their roles despite increases in efficiency or productivity, a pattern that underscores how AI-driven performance metrics may obscure underlying emotional strain. Recent research by Brunnlechner (2025) offers further nuance to the psychosocial impacts of AI use in the workplace. Her study demonstrates that frequent AI usage significantly enhances positive employee performance by increasing self-efficacy, particularly confidence in problem-solving, task efficiency, and goal achievement. This supports the view that AI can act as a performance enhancer by fostering a greater sense of competence and control. However, her findings also caution against overly simplistic interpretations of AI's benefits. While self-efficacy mediated the positive effects of AI use, it did not mediate unintended counterproductive behaviours such as reduced effort or skill decay. Instead, Brunnlechner found that trust in AI, rather than its frequency of use, was a stronger predictor of these negative outcomes. Employees who placed high trust in AI systems were more likely to disengage from tasks, defer critical thinking, or experience skill deterioration over time. These findings suggest that AI fatigue may not stem solely from cognitive overload or system complexity, but also from the *psychological dynamics of over-trust and complacency*, reinforcing the need for calibrated trust and critical engagement with AI tools in organisational settings. These emotional stressors are often compounded by ethical and relational dilemmas.

As AI systems automate aspects of human judgment, such as hiring, grading, or medical triage, users report discomfort with opaque decisions that lack accountability. This contributes to ethical fatigue, in which individuals feel alienated from outcomes they are expected to enforce or justify. In such cases, the emotional toll arises not from the presence of AI per se, but from the erosion of moral clarity and relational trust in AI-mediated environments (Arnold *et al.,* 2023). Ultimately, these cognitive and emotional symptoms point to a deeper breakdown in the human-technology relationship. While AI systems are often praised for reducing cognitive load,

their complexity and unpredictability instead produce cognitive overload, particularly when users are given limited control, training, or time to adapt. AI fatigue, then, is less about resistance to innovation than about a crisis of *overexposure, opacity,* and *unsustainable cognitive demand.*

Organisational and Technological Drivers of AI Fatigue

Many of the underlying drivers of AI fatigue are not technological in essence, but organisational in implementation. As Arslan *et al.* (2021) argue, the increasing presence of AI-powered systems, especially robots working alongside humans as teammates, introduces challenges that go beyond functional concerns. Workers often report anxiety about job security, discomfort in trusting opaque AI decisions, and confusion about their evolving roles. These dynamics are intensified by inadequate training, unclear task expectations, and a lack of performance evaluation frameworks that fairly distinguish between human and AI capabilities. Such organisational shortcomings mirror key drivers of AI fatigue, namely, techno-insecurity, techno-complexity, and role ambiguity. To address these issues, Arslan *et al.* (2021) recommend participatory strategies such as upfront communication, skills development, and human-centred evaluation systems to help employees navigate AI transitions without psychological depletion. Their findings reinforce the argument that fatigue is not solely cognitive, but a systemic result of how AI is deployed and managed within teams. In the same vein, Rasool *et al.* (2022) argue, technology overload often emerges from poorly designed work systems, in which digital tools are introduced without sufficient attention to employee capacity, workflow alignment, or training. This reflects the phenomenon of techno-overload, where new tools amplify existing tasks rather than streamlining them. Employees may find themselves doing more work, not less, switching between platforms, reconciling outputs, and resolving errors introduced by AI tools, which undermines the promise of automation. Another major contributor is techno-uncertainty, where workers are subjected to continuous updates, interface changes, and new feature rollouts with minimal warning or guidance (Ayyash, 2022). This constant flux not only creates learning fatigue but also fuels a perception that stability and competence are fleeting. In rapidly evolving AI ecosystems, even digitally literate workers may feel perpetually behind, forced into a state of reactive, rather than proactive, adaptation. This undermines psychological safety, as employees become hesitant to fully engage with tools they suspect will soon be obsolete. Compounding these effects is the design of AI systems themselves. Many enterprise AI platforms are opaque, offering little insight into how outputs are generated or what variables influence decisions. Chuang *et al.* (2025) show that this opacity can produce a form of cognitive dissonance, where users are required to trust systems, they do not understand. The lack of formal disconnection policies in South African firms, as shown in Ruddy's (2017) study, underscores the importance of regulatory interventions to curb digital burnout. Even when AI improves task speed or accuracy, the lack of explainability leaves users feeling deskilled and disconnected from their decision-making. Moreover, as AI becomes more generative, capable of producing text, code, or images independently, it introduces new complexities around authorship, reliability, and ethical accountability. AI fatigue is also driven by role ambiguity and shifting expectations. Employees are not only expected to master technical systems but also to evaluate them critically, interpret their output, and remain responsible for outcomes. This is what Tarafdar *et al.* (2007) refer to as *techno-complexity*: the sense that one's role has become harder, less defined, and increasingly dependent on systems that are difficult to control. This complexity turns every user into a kind of AI interpreter, responsible for translating, troubleshooting, and validating system behaviour, without always having the authority or clarity to do so.

Structural Inequality and the Uneven Distribution of AI Fatigue

While AI fatigue is increasingly recognised as a global phenomenon, its distribution is not equal. As Göldağ (2022) demonstrates, burnout risk is unevenly distributed by factors such as gender, device type, and education level, with undergraduates and smartphone users particularly vulnerable. In contexts marked by digital inequality and infrastructural precarity, the psychological burden of AI integration is magnified by systemic constraints. These findings are echoed in Ashraf's (2025) study of Generation Z, which highlights how digital burnout is not simply a result of overuse but the product of intersecting systemic pressures, including academic expectations, social media performance culture, and insufficient mental health support. Ashraf's study reveals that Gen Z is uniquely exposed to digital burnout due to constant online engagement, often accompanied by anxiety, FOMO (fear of missing out), and identity stress. His findings show that tailored interventions, such as mindfulness practices, digital detoxes, and digital mental health tools (DMHIs), can reduce burnout symptoms and improve overall well-being. In 10 out of 16 reviewed randomised controlled trials, such interventions yielded notable mental health improvements, while five trials showed significant reductions in burnout symptoms. These insights underline the importance of culturally sensitive, flexible, and accessible interventions, especially for younger users navigating hyper-connected environments.

As Ayyash (2022) notes, technostress often emerges not just from the tools themselves but from *uneven access to digital resources, unreliable networks, and inadequate training*. In such environments, the pressure to adopt AI is layered atop an already fragmented digital landscape, producing what might be termed "fatigue by design." This is especially evident in educational and public-sector contexts, where AI-enhanced tools are often deployed without parallel investments in infrastructure or capacity-building. For example, teachers may be

expected to implement AI-based assessment platforms without access to stable internet or institutional support. As a result, the stress of technological adaptation becomes inseparable from broader structural exclusions. Here, AI fatigue reflects not just technological strain, but a deepening of digital inequality under the guise of innovation. Even in more technologically resourced settings, socioeconomic and occupational hierarchies shape how AI fatigue is experienced. Administrative, teaching and frontline knowledge workers are often disproportionately affected because they face simultaneous expectations of technological fluency, emotional labour, and accountability. Meanwhile, senior managers and executives may remain shielded from these pressures, occupying a vantage point from which AI appears only as a productivity enhancer. The disconnect between strategic vision and lived experience is well documented in the 2024 EY report, which found that 53% of leaders acknowledged employee overwhelm, even as investment in AI continued to rise. Finally, cultural narratives around AI also influence fatigue. In high-surveillance work cultures or performance-driven institutions, AI is often framed not as a tool but as a metric, used to track, evaluate, or optimise workers. This contributes to what scholars such as Turkle (2011) and Wang *et al.* (2020) describe as a loss of agency and relational depth, as people are increasingly treated as data points rather than full human beings. AI fatigue, in these cases, is not just the cost of new technology, but the symptom of a broader dehumanisation in digital systems design.

Responding To AI Fatigue: Strategies for Design, Policy and Organisational Wellbeing

Organisational Strategies for Mitigating AI Fatigue

Tackling AI fatigue requires organisations to shift from a technology-first to a *human-centred* model of digital transformation. This starts with acknowledging that successful AI integration must support, not erode, psychological safety and role clarity. The EY Global AI Survey (2024) found that while 95% of companies reported ROI improvements from AI, over half of the leaders also admitted that employees felt overwhelmed and disengaged by the pace of adoption. A robust organisational strategy should therefore prioritise *participatory implementation*, where employees co-design how and when AI tools are integrated into their workflows. Leadership plays a critical role in buffering AI-induced stress. As Sanchez-Segura *et al.* (2023) argue, digital transformation initiatives must be tied to organisational health and safety frameworks, with burnout treated as a legitimate occupational risk, not merely a performance issue. They emphasise that workplace wellbeing is a strategic concern and call for *structural prevention strategies*, including regular check-ins, workload monitoring, and digital wellness audits.

Moreover, workplace training must evolve from basic AI tool tutorials to long-term capacity-building. Rather than simply instructing users on functionality, organisations should cultivate *AI fluency*, a mix of technical literacy, critical thinking, and ethical reflection. The Forbes Technology Council (Castrillon, 2025) recommends integrating coaching, peer mentoring, and job redesign into upskilling initiatives to reduce burnout risk and empower users to feel competent, not coerced. Flexibility in tool usage, such as allowing opt-out pathways or customisation, further reinforces user autonomy. Additionally, companies should consider using predictive wellbeing systems to identify at-risk users. AI-based solutions like those highlighted in the C4DX innovation challenge e.g., BreakBuddies, Bright Software, and Burnout WT, leverage biometric and behavioural data to offer personalised interventions, track stress levels, and suggest recovery strategies before full burnout sets in. These tools exemplify how AI can be redeployed as a *supportive mechanism* rather than just a productivity driver.

Ethical and Human-Centred Design Interventions

Designing AI systems that align with human cognitive and emotional limits is crucial to addressing fatigue. Cognitive Load Theory (Sweller, 1988) reminds us that the format, complexity, and delivery of information profoundly influence user performance. Unfortunately, many AI tools today overwhelm users with *poor UX, excessive notifications, and unexplained automation*. As Arnold et al. (2023) note, when users must navigate opaque systems under time pressure, both intrinsic and extraneous load increase, undermining trust and focus. To mitigate this, Explainable AI (XAI) principles should become a standard design requirement. XAI seeks to make algorithmic logic transparent, offering users insight into how and why a system arrived at a given recommendation. According to Sanchez-Segura *et al.* (2023), user empowerment through information transparency is one of the most promising ways to reduce burnout in digital workplaces. Platforms that surface uncertainty ranges, offer human override options, or enable feedback loops can reduce cognitive strain while preserving user agency. Equally important is that ethical, emotional design AI tools should be effectively sensitive, adaptive, and non-coercive. For example, several C4DX proposals, such as Charlie, a gender-neutral virtual assistant, were built to monitor mental wellbeing, recommend breaks, and encourage positive behaviour through *empathetic interaction design* (Latrobe, 2024). Tools such as this suggest a path forward for AI as a *wellness co-pilot*, not just a taskmaster. Lastly, user-centred design must be inclusive and context-aware. Many AI interfaces assume constant connectivity, high-speed processing, and uninterrupted access conditions that do not exist universally. Poorly designed AI becomes an equity issue, compounding fatigue among users in under-resourced environments. Designers should therefore

embed *accessibility and adaptability* into their systems from the outset, accommodating diverse cognitive styles, digital fluency levels, and cultural contexts.

Policy and Societal Interventions for Equitable AI Integration

While internal organisational strategies are crucial, AI fatigue also requires macro-level policy responses. Public institutions must recognise that automation-induced stress is a legitimate occupational health risk and legislate accordingly. For example, AI-enhanced work environments should fall under the same legal frameworks that govern safe workloads, ergonomic standards, and employee monitoring. The World Health Organisation's formal recognition of burnout as an occupational syndrome (ICD-11) provides the legal and moral basis for such regulation (Sanchez-Segura *et al.,* 2023). One critical step is to mandate algorithmic transparency and oversight in workplaces where AI makes decisions about task allocation, performance evaluation, or schedule management. Without these safeguards, AI becomes a tool of soft control, subtly increasing demands without accountability. Policy briefs like those by Goyal (2023) and Rasool *et al.* (2022) argue for a "right to explanation" and *human-in-the-loop requirements* to prevent disempowerment and decision fatigue. At the educational level, governments and universities must implement AI literacy programs that go beyond coding to include *critical AI thinking*, understanding bias, explainability, risk, and emotional impacts. This is especially important for younger users and employees in transition sectors such as education, healthcare, and retail. Digital transformation cannot be successful if it outpaces the psychological readiness of its users. Finally, national innovation programs should fund tools that use AI to support wellbeing, not just efficiency. As the C4DX challenge demonstrated, emerging platforms can proactively monitor stress, offer mental health resources, and encourage rest and recovery. These tools, whether wristband-based biometric systems, mindfulness scheduling apps, or digital break-room systems, suggest a future where AI is a *protector of mental health* rather than a threat to it.

Conclusion

AI fatigue is an emerging psychosocial condition shaped not merely by the presence of artificial intelligence, but by the speed, scale, and structure of its integration into daily life. This paper has argued that AI fatigue is best understood through the dual lenses of technostress and cognitive load theory, revealing how the relentless pace of digital transformation coupled with poor design, ethical ambiguity, and structural inequality undermines emotional resilience and cognitive wellbeing. As AI systems increasingly mediate work, learning, and social interaction, fatigue becomes a symptom of deeper tensions in the human-technology relationship: overexposure without agency, complexity without clarity, and automation without support.

Looking ahead, there is a pressing need for empirical research that captures the lived experience of AI fatigue across diverse sectors and demographics. Longitudinal studies, ethnographic research, and cross-cultural comparisons would offer valuable insights into how fatigue manifests in different environments and how individuals adapt or fail to adapt over time. Future work should also explore the efficacy of design and policy interventions, including explainable AI (XAI), digital wellness tools, and participatory implementation models. By treating AI fatigue not as a fringe reaction but as a systemic response to accelerated digital change, researchers, designers, and policymakers can better align innovation with human needs and psychological sustainability.

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