

歐盟「人工智慧法案」下， 「智慧長照3.0」的運用場景、 風險分級與法規挑戰

Application Scenarios, Risk Classification, and
Regulatory Challenges of "Smart Long-Term Care 3.0"
under the European Union AI Act (EU AI Act)

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摘要

本文旨在探討在歐盟「人工智慧法案」的框架下，臺灣「智慧長照3.0」的運用場景、風險分級，以及所面臨的倫理與合規挑戰。「長照3.0」體系中所涵蓋的智慧長照AI系統其類型與應用場景極為多元。本文分析了人工智慧物聯網在長照領域的四類具體應用，鑑於長者在歐盟通用資料保護規則和歐盟「人工智慧法案」中均被視為易受影響的脆弱主體，這對資料控管者和AI開發者提出了超越一般標準的更高合規義務。本文由此認為臺灣在推動科技長照的同時，應同步部

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關鍵詞：人工智慧物聯網 (artificial intelligence of things, AIoT)、風險等級 (risk classification)、脆弱資料主體 (vulnerable data subjects)、智慧長照 3.0 (smart long-term care 3.0)、歐盟人工智慧法 (European Union Artificial Intelligence Act, EU AI ACT)

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署符合國際高標準的風險管理。臺灣「人工智慧基本法」已於2025年12月24日完成立法三讀，其採取「風險分類」模式，與歐盟之「風險分級」在規範技術與法律效果上有所區辨，面對具有高度指標性與外溢影響力的參考框架「人工智慧法案」時，需要解決：第一、系統盤點與分類：盤點智慧長照主要涵蓋哪些具體AI應用（如跌倒偵測、行為分析、決策支援系統），並評估其在「人工智慧法案」架構下（特別是高風險類別）的準確風險定位；第二、監管模式與義務確立：根據其風險等級，確立一套適當的監督管理模式，並明確界定資料控管者與開發者的合規義務。

This paper aims to explore the application scenarios, risk classification, and the ethical and compliance challenges faced by Taiwan's "Smart Long-term Care 3.0" under the framework of the (Europe Artificial Intelligence Act) EUAI Act. The types and application scenarios of smart long-term care AI systems covered within the Long-term Care 3.0" system are extremely diverse. This paper analyzes four specific applications of AIoT (Artificial Intelligence of Things) applications in the long-term care sector. Given that the elderly are considered vulnerable data subjects under both the GDPR and the EU AI Act, this imposes higher compliance obligations on data controllers and AI developers that go beyond general standards. Consequently, this paper argues that while promoting technology-driven long-term care, Taiwan must simultaneously deploy risk management strategies that align with high international standards. Taiwan's "Basic Law on Artificial Intelligence," enacted on December 24, 2025, adopts a "Risk Categorization" model, which distinguishes itself from the EU's "Risk Classification" in terms of regulatory techniques and legal effects. When addressing the

influential and far-reaching framework of the EU AI Act, the following issues must be resolved: 1. System Inventory and Classification: Identifying the specific AI applications primarily covered by smart long-term care (such as fall detection, behavior analysis, and decision support systems) and assessing their precise risk positioning under the EU AI Act framework, particularly within the high-risk categories; and 2. Establishment of Regulatory Models and Obligations: Establishing an appropriate supervision and management model based on risk levels, and clearly defining the compliance obligations of providers and deployers.

壹、概述

「臺灣長照2.0」服務體系即將屆滿，面對即將邁入超高齡社會所帶來的龐大長照需求與照顧人力短缺，需要積極擁抱「智慧長照3.0」。行政院目前已正式核定「長照3.0」計畫，明確將智慧照顧納入核心目標，期望藉助人工智慧物聯網技術，有效系統化的建立智慧照顧服務網絡。要釐清上述問題所要面臨的合規義務和監管責任，需要解決如下幾個問題：「長照3.0」具體包含的智慧照顧內容為何？依靠何種技術實現？包括哪些具體的運用場景和類型？在歐盟人工智慧法案（Europe Artificial Intelligence Act, EU AI Act）當中具體有無對應的風險類型？是否同時受到EU AI ACT和歐盟通用資料保護規則（General Data Protection Regulation, GDPR）的雙軌並行監管？高風險類型中的合規義務包括？是否會觸及到限制發展的AI風險？區分二者的邊界和關鍵為何？長者在GDPR和AI Act當中被歸類為易受影響的脆弱主體，何為脆弱主體，對開發者的合規義務又有什麼新的要求？值得注意的是，臺灣人