Popularisation of
AI Applications
Drives New Digital Era

普及 AI 應用　飛越數碼時代

Hutchison Telecommunications (Hong Kong) Limited
和記電訊（香港）有限公司

The rapid development of artificial intelligence (AI) has seen the use of AI applications unknowingly integrate into our lives, bringing unprecedented business opportunities across various industries. A market research* forecasts that the global AI market size is expected to grow at a CAGR of about 37% from 2024 to 2030, reaching US$1,811.8 billion by 2030. 5G, coupled with AI and other advanced technologies, such as blockchain, cloud computing, big data and edge computing, can provide a wide range of solutions for different industries including telecommunications to enhance operational efficiency and create new ecosystems.

AI Helps Allocate Network Resources, Save Energy and Reduce Emissions

Hutchison Telecommunications (Hong Kong) Limited (HTHK), a pioneer in deploying and popularising AI apps, is an example of mobile operators highly committed to innovation with active deployment of the latest technologies.

In 2024, we adopted an industry-leading AI energy saving solution to enhance the efficient use of energy and energy-saving capabilities of 5G base stations in Hong Kong, aiming to achieve a "zero bit, zero watt" energy-saving goal. The AI solution automatically switches the

人工智能（AI）急速發展，應用愈見普及，並在不知不覺間融入生活，以及為各行各業帶來前所未有的商機。有市場研究預期，2024 年至 2030 年期間，全球人工智能市場規模的年均增長約 37%，於 2030 年將達 18,118 億美元*。5G 結合人工智能與及其他嶄新先進科技，包括區塊鏈、雲端運算、大數據和邊緣運算等，能為包括電訊業等不同行業提供多元化的方案，以提升營運效率，創造全新的生態系統。

AI 助配置網絡資源及減排節能

電訊服務營辦商一直致力創新，積極應用最新科技。以和記電訊（香港）有限公司（和記電訊香港）為例，在應用和普及人工智能方面擔當著先行者的角色。

我們於 2024 年於香港採用領先業界的人工智能（AI）節能方案，大幅提升 5G 基站使用能源及節能的效率，以達致「0 Bit 0 Watt」（零數據傳輸時零耗電）的節能目標。有關方案利用人工智能全天候

network to a smart energy-saving mode during low traffic periods, and is expected to help reduce approximately 400,000kg of carbon dioxide emissions (CO_2) every year, equivalent to that emitted by about 2,600 flight journeys between Hong Kong and Beijing.

HTHK also uses AI to automatically boost network speed for specific user groups during peak hours and to optimise usage and allocation of network resources of network nodes to avoid network congestion. AI can even predict early network equipment failures, alerting the network team to identify potential issues proactively, ensuring stable and reliable mobile services.

管理和分析網絡的使用情況，協助配置網絡資源。在低用量時自動調整網絡進入智慧節能模式，預期每年可減少排放二氧化碳約 40 萬公斤，相等於由香港飛往北京約 2,600 次的總碳排放量。

另一方面，和記電訊香港亦透過人工智能於繁忙時間自動為特定用戶群提升網絡速度，或透過優化網絡節點的使用情況及資源編配，避免網絡擠塞。人工智能更可預測早期網絡設備故障，提示工程團隊及早識別潛在問題，未雨綢繆，確保流動通訊服務穩定可靠。

AI robot can detect the environment in confined spaces with built-in cameras, as well as gas, humidity and temperature sensors.
人工智能機械人可透過內置鏡頭，以及氣體、濕度及溫度感應器，探測密閉空間內的環境。

Intensively Training for AI Chatbots

AI is also widely deployed to improve the quality and efficiency of the company's customer service. Intensively "trained" and "fine-tuned" chatbots can promptly resolve more than half of the company's customer enquiries, achieving an accuracy rate of 80% and helping to reduce customer waiting time and save manpower. In addition, to cope with growing concerns for cybersecurity threats, HTHK has also used AI algorithms to analyse data traffic patterns and deployed AI-powered anti-fraud software to automatically identify and block malicious websites driven by AI, thereby enhancing network security.

精心「訓練」AI 聊天機器人

此外，人工智能亦廣泛應用於提升公司客戶服務的質素及效率，經過精心「訓練」及「調校」的聊天機器人，能迅速解答公司逾半的客戶查詢，而且能做到答「是」所問，精準度達八成，不但減少客戶的等待時間，亦可節省人力資源。另外，面對網絡保安問題日趨嚴重，和記電訊香港亦善用人工智能演算法分析數據流量狀況，並採用人工智能防詐騙軟件，自動識別由人工智能驅動的惡意網站，提供防護措施封鎖有關網站，提升網絡安全。

HTHK identifies and promotes the latest AI solutions for different industries to further innovation of business models.
和記電訊網羅最新方案，推動各行各業採用人工智能以革新業務。

Smart and Digitalised Enterprises with AI Empowering Various Industries

Advancing beyond the telecoms business, we have identified the latest AI solutions for enterprises of various sizes in different industries, promoting the adoption of AI to transform business models and enhance competitiveness. The most commonly known applications include AI-powered smart car parks and chatbots for large shopping malls. Other industries using AI include healthcare, medical imaging and education. An example is using AI to create virtual tutors to simulate teaching environments. This can reduce the cost of human resources and on-site filming while promoting the development of smart campuses.

AI as a Double-edged Sword, Requiring Attention to Data Security and Personal Privacy

As 5G technology gradually evolves to 5G-Advanced with further speed enhancement, more AI application scenarios will emerge accelerating other market changes. The ongoing integration of AI features into smartphones, computers and other mobile devices is expected to further boost and expand the use of AI solutions.

While AI is unleashing its immense potential, it also brings challenges. There is widespread concern about personal privacy, data leakage and regulatory issues stemming from the use of AI. Instances have been reported where scammers use AI-generated deep fakes, employing harvested voices and images, to mimic individuals and commit fraud. As global regulatory frameworks for AI are still maturing, industries should adopt appropriate risk management measures to strike a balance between advancing AI development and regulation to safeguard digital assets.

企業數碼智能化、AI 教學賦能各行各業

除電訊本業外，我們亦靚準不同行業和不同規模的企業，網羅最新方案，推動各行各業採用人工智能以革新業務，提升競爭力。其中，最為人熟知的當數智慧物管範疇的智慧停車場和大型商場的人工智能聊天機械人。跳出商界的領域，人工智能亦可應用於醫療保健、醫療影像及教育等，例如利用人工智能創造虛擬導師，模擬教學環境制作教學影片，減低人力資源和實境拍攝的成本，同時促進智慧校園的發展。

人工智能是雙刃刀
須注意數據安全及個人私隱

隨著 5G 技術逐步演進至 5G-Advanced 技術，傳輸速度繼續提升，將有助更多 AI 應用場景出台，以及催生市場其他變化。其中智能手機、電腦及其他流動裝置將陸續加入人工智能的功能，預期會進一步推動和普及人工智能的應用。

然而，人工智能在釋放龐大潛力的同時，亦帶來各種挑戰。其中，人工智能衍生出來的個人私隱、資料外洩和監管問題引起廣泛關注，如騙徒可利用收集得來的聲音和影像作人工智能深度偽造，模仿用戶以騙取金錢。當人工智能的全球監管法規仍未成熟，各行各業宜採取適當的風險管理措施，於推進人工智能發展和監管方面取得平衡，以維護數碼資產安全。

Concerns have been raised about the personal privacy, data leakage and regulatory issues stemming from the use of AI.
人工智能衍生出來的個人私隱、資料外洩和監管問題引起廣泛關注。

*Source: https://www.grandviewresearch.com/press-release/global-artificial-intelligence-ai-market