



Press Release – For Immediate Release

To: Assignment Editor/Editor of Education and Local News Sections

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HSUHK research explores how AI is transforming historical newspaper preservation and research

A new study by researchers at The Hang Seng University of Hong Kong (HSUHK) examines how artificial intelligence (AI) is reshaping the preservation, accessibility, and analysis of historical newspapers.

Authored by Dr Howard Song and Dr Cheung Kwok-wai, Associate Professors at HSUHK's School of Communication, and Jia Ziyun, the paper *Transforming Historical Newspaper Research and Preservation Through AI: A Global Perspective*, explores how emerging technologies can help libraries, archives, and researchers preserve and unlock valuable historical records. It was published in the international academic journal *Journalism and Media*, Volume 7, Issue 1 (2026).

Drawing on international case studies, the research examines how AI technologies, including optical character recognition (OCR), natural language processing (NLP), and large language models (LLMs) can significantly enhance text extraction, image restoration, metadata generation, and semantic enrichment. For example, advanced OCR systems using deep learning outperform traditional OCR, especially when processing degraded documents or complex layouts, while AI-powered OCR tools can process multilingual texts with layout analysis, reducing manual preprocessing. LLMs are used for post-OCR correction, significantly reducing character error rates, while image restoration employs generative adversarial networks (GANs) to remove noise, sharpen images, and reconstruct damaged visuals, improving OCR accuracy.

Through qualitative case studies and comparative analysis of projects worldwide, this research demonstrates how AI not only improves the accuracy and efficiency of preservation workflows but also enables novel forms of computational inquiry such as cross-lingual analysis, sentiment detection, and discourse tracking.

The findings underscore AI's transformative role in unlocking historical newspaper archives for both scholarly and public use, thereby fostering a deeper understanding of cultural heritage and historical narratives worldwide.

The paper also discusses challenges associated with AI adoption, including bias, authenticity and the need for responsible implementation. It argues that human oversight remains essential for ensuring the accuracy and integrity of historical records.

According to Dr Howard Song, such developments offer valuable lessons for Hong Kong and other Asian institutions seeking to preserve their newspaper collections. "AI enables researchers to



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transform historical newspapers from static images into searchable and analysable datasets,” he explains. “At the same time, it can make historical knowledge more accessible to educators, students, journalists and the wider public.”

The study forms part of an RGC-funded project, *Business News Treasures in the Vanishing Old Newspapers in Hong Kong*, led by Dr Song. The project seeks to document and preserve Hong Kong's business journalism heritage, much of which is increasingly threatened by the deterioration, fragmentation and disappearance of historical newspaper collections. “Hong Kong has more than 160 years of business journalism history, yet many newspapers have ceased publication, and some archival materials have already been lost,” notes Dr Song. “Preserving these vanishing records has become an urgent priority.”

By making historical newspapers more accessible and usable, AI has the potential to democratise access to history and strengthen public engagement with cultural heritage, Dr Song adds. The research contributes to the growing fields of digital humanities and computational archival science while supporting efforts to preserve Hong Kong’s historical newspaper legacy.

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Photo:



Photo caption: A new study by researchers at HSUHK underscores AI’s transformative role in unlocking historical newspaper archives for both scholarly and public use, thereby fostering a deeper understanding of cultural heritage and historical narratives worldwide.

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About The Hang Seng University of Hong Kong

The Hang Seng University of Hong Kong (HSUHK) is a non-profit private liberal-arts-oriented university with six Schools (Business, Communication, Decision Sciences, Humanities and Social Science, Translation and Foreign Languages, and Transdisciplinary Studies), and over 7,000 full-time undergraduate and postgraduate students. With its unique “Liberal + Professional” education model, HSUHK nurtures young talent with critical thinking, innovative minds, caring attitudes, moral values and social responsibility.

Aspiring to be a leading private university in the region, HSUHK prioritises stellar undergraduate education, top-quality faculty members, award-winning green campus facilities, innovative degree programmes, a unique residential college system that combines living and learning, interactive small-class teaching, close student-teacher relationships, impactful research, and excellent student development and support services.

HSUHK has earned various international recognitions. In the AppliedHE’s ALL ASIA Private University Ranking 2026, it secured 7th place in China. HSUHK ranked 24th in Social Sciences and Humanities and 23rd in both Business and Management and Economics and Finance among China’s top universities in the Research.com Top Universities and Top Scientists Rankings 2026. The MSc in Global Supply Chain Management programme achieved 84th place globally in the QS International Trade Rankings 2025. Additionally, HSUHK’s School of Business obtained AACSB International accreditation in 2023, a mark of excellence held by only 6% of the world’s leading business schools. HSUHK was also ranked among the top 200 worldwide on “Quality Education” and “Decent Work and Economic Growth” in the Times Higher Education University Impact Rankings 2021.