



202.464.1982 1800 K Street NW

THE PENINSULA

Korea is Having its AI Moment

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Author: Tom RamageCategory: South Korea

The world is in a technology revolution surrounding artificial intelligence (AI). Companies are competing to scoop up the best AI talent, and each is looking to be the first to shore up partnerships with the top firms. Among others, Meta with Dell to cooperate on Llama 2; Apple with Google to incorporate their Gemini AI; and OpenAI with its own veritable roster including a \$100 billion data center partnership with Microsoft while it courts investment from a who's who in Silicon Valley titans.

AI technologies use systems trained on large data sets. Korea's role as the global center of memory chip technologies used in AI data storage systems means it is playing a central role in the AI transition and it is one of the many factors contributing to the international attention it is receiving for AI collaboration—all of which gives it firm footing in the race to deploy new technologies surrounding the propitiously dubbed AI boom.

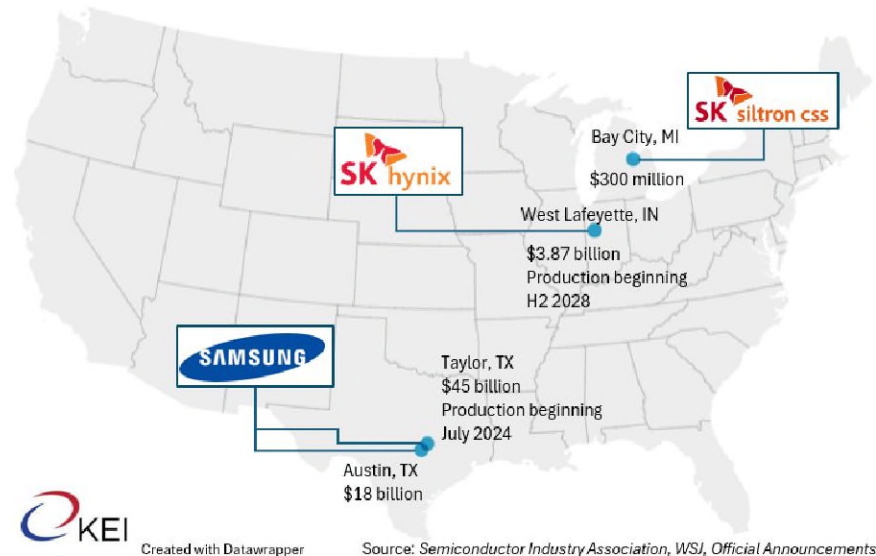
This has led Silicon Valley leaders to actively engage with Korea, where they seek audiences with President Yoon Suk Yeol and the leading technology figures within the country. Accordingly, the first two months of 2024 saw visits to Korea by OpenAI CEO Sam Altman and Meta's Mark Zuckerberg—both in pursuit of AI cooperation.

Judging by the focus Korean companies are placing in AI innovation, they are not wrong. Samsung consistently appears in the top ranks for its number of AI-related patents, while SK Hynix is set to supply NVIDIA with the high bandwidth memory (HBM) chips needed to power the graphics processing units (GPUs) used in their AI-centric semiconductors. Moreover, the Korean government's plans, such as the \$471.4 billion Yongin Semiconductor Cluster, reflect a concerted effort to drive the country's AI capabilities forward, which is

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spurring a corresponding rush of investor confidence. In the wake of the flurry of investment announcements surrounding Korean chip companies role in AI, share prices for both SK Hynix and Samsung have ascended rapidly and analysts are saying there's more to come as the HBM market looks to expand a thousand percent by 2026. Consequently, Korean companies are placing big bets on their advanced chip packaging operations, and it's spilling over to the United States where Korean companies are making full use of the generous incentives set aside by the CHIPS Act. As such, even Korean power equipment companies are riding the wave of success from their role in supplying the boom as energy intensive AI data centers begin to make their full debut.

Korean Semiconductor Manufacturing Projects in the United States



Simultaneously, American firms are pouring money into Seoul-based AI startups, fostering a mutually beneficial exchange of resources and expertise. Bolstered by one of the top electronics markets in the world, these deals are inundating Korean firms with partnerships to deploy advanced GPUs and develop AI search engines and customer chatbots. Accordingly, recent placements by Moreh, CCK Solution, and others on Hugging Faces's large language model (LLM) benchmark show Korean companies as international leaders in LLM development used for AI, while Kakao and KT are on their way to joining the ranks of Naver, LG, and Samsung in developing AI chatbots shows great promise for the Korean AI business—especially as they expand to cover languages beyond Korean. All of this is part of why Korea is one of the leading countries in its overall depth of AI scale-up.

Selection of Recent US-Korea AI Deals

Date	American Entity	Korean Entity	Project
<u>April 9, 2024</u>	Intel	Naver	Integration of Intel's Gaudi 3 processor into Naver's cloud LLM infrastructure
<u>March 27, 2024</u>	Google Cloud	NCSOFT	Joint commitment to advance AI, cloud, and productivity initiatives

<u>March 12, 2024</u>	Bear Robotics	LG Electronics	\$60 million strategic investment by LGES into Bear Robotics to advance development in AI food delivery robots
<u>February 29, 2024</u>	Amazon Web Services	KT	Partnership to develop generative AI using Amazon Bedrock
<u>February 27, 2024</u>	Amazon Web Services	LG U+	AI utilization collaboration agreement
<u>February 27, 2024</u>	Humane	SK Telecom	Partnership for SK Telecom to be exclusive provider for Humane's Ai Pin in Korea
<u>February 26, 2024</u>	Perplexity	SK Telecom	Partnership for SK Telecom to offer Perplexitiy's AI-based search engine in its services
<u>January 30, 2024</u>	Rockwell Automation	MakinaRocks	Strategic partnership to integrate AI into industrial automation
<u>January 30, 2024</u>	Sivoo	Furiosa	Sivoo to deploy Furiosa's AI 'Warboy' accelerator card for generative AI tasks
<u>November 6, 2023</u>	Imprimed	SK Telecom	SK Telecom investment into Imprimed to launch AI healthcare business
<u>November 3, 2023</u>	New York City American Chamber of Commerce in Korea	LNG CNS	MOU with New York City and American Chamber of Commerce in Korea for LG CNS to apply new DX technologies such as AI to New York City

<u>October 26, 2023</u>	AMD	Moreh	\$22 combined Series B investment by AMD and KT into Moreh, using AMD GPUs as alternative to NVIDIA
<u>October 24, 2023</u>	Nvidia Intel	Twelve Labs	\$10 million Series A funding by NVIDIA, Intel into Korean AI Startup Twelve Labs
<u>October 23, 2023</u>	Koop	Hyundai-Kia	Strategic investment by Hyundai-Kia in Koop to produce product development for autonomous vehicles
<u>October 6, 2024</u>	Microsoft	WRTN	Agreement for WRTN to expand the use of Microsoft Azure across its AI tools
<u>September 22, 2023</u>	NYU	KAIST	Agreement to collaborate on AI and digital technology research
<u>August 15, 2023</u>	Anthropic	SK Telecom	Partnership to develop large language model. \$100 million investment from SK Telecom into Anthropic
<u>July 13, 2023</u>	Google	Ministry of Science and ICT	Partnership for AI Developer Training Program
<u>July 4, 2023</u>	Google	WRTN	Implementation of Google's PaLM 2 LLM into WRTN's AI tools

<u>October 3,</u> <u>2022</u>	NVIDIA	2Digit	Technical cooperation on natural language processing and artificial intelligence
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Accompanying this is the Korean government's forward-thinking vision for the technology's development. The Digital Strategy of Korea unveiled in September 2022 earmarks more than \$750 billion through 2026 to develop core technologies for AI semiconductors; efforts which were demonstrated as recently as this month when President Yoon announced roughly \$7 billion in new investment to expand development in AI chips. Meanwhile Korea's K-Cloud project separately works to heavily subsidize the development of NPU chips, which are specifically designed for processing machine learning algorithms, for AI data centers.

All of which is done with an eye towards responsible governance. Korea's Digital Bill of Rights, which preceded the United States' own Blueprint for an AI Bill of Rights released in October 2022, enshrines safe utilization protections into the use of digital technologies.

President Yoon has embarked on a global campaign calling for close cooperation between governments to create a framework for AI governance—something which was iterated in the commitments outlined at the Camp David Summit between the United States, Korea, and Japan in August. This has been manifested both as an undertone of the 2024 Summit for Democracy and through Korea's involvement in hosting the AI Safety Summit and REAIM Summit later this year, where we are likely to see more done surrounding the makings of an international governance framework

As governments worldwide are beginning to understand both the promise and potential of AI in transforming the economy, Korea's investments in chips, tech talent, and relationships with US companies have all the makings of a first mover advantage with the potential for US-Korea economic partnerships to flourish.

Tom Ramage is an Economic Policy Analyst at the Korea Economic Institute of America. The views expressed here are the author's alone.

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