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# AI Policy and Regulations of South Korea

## Comprehensive Report

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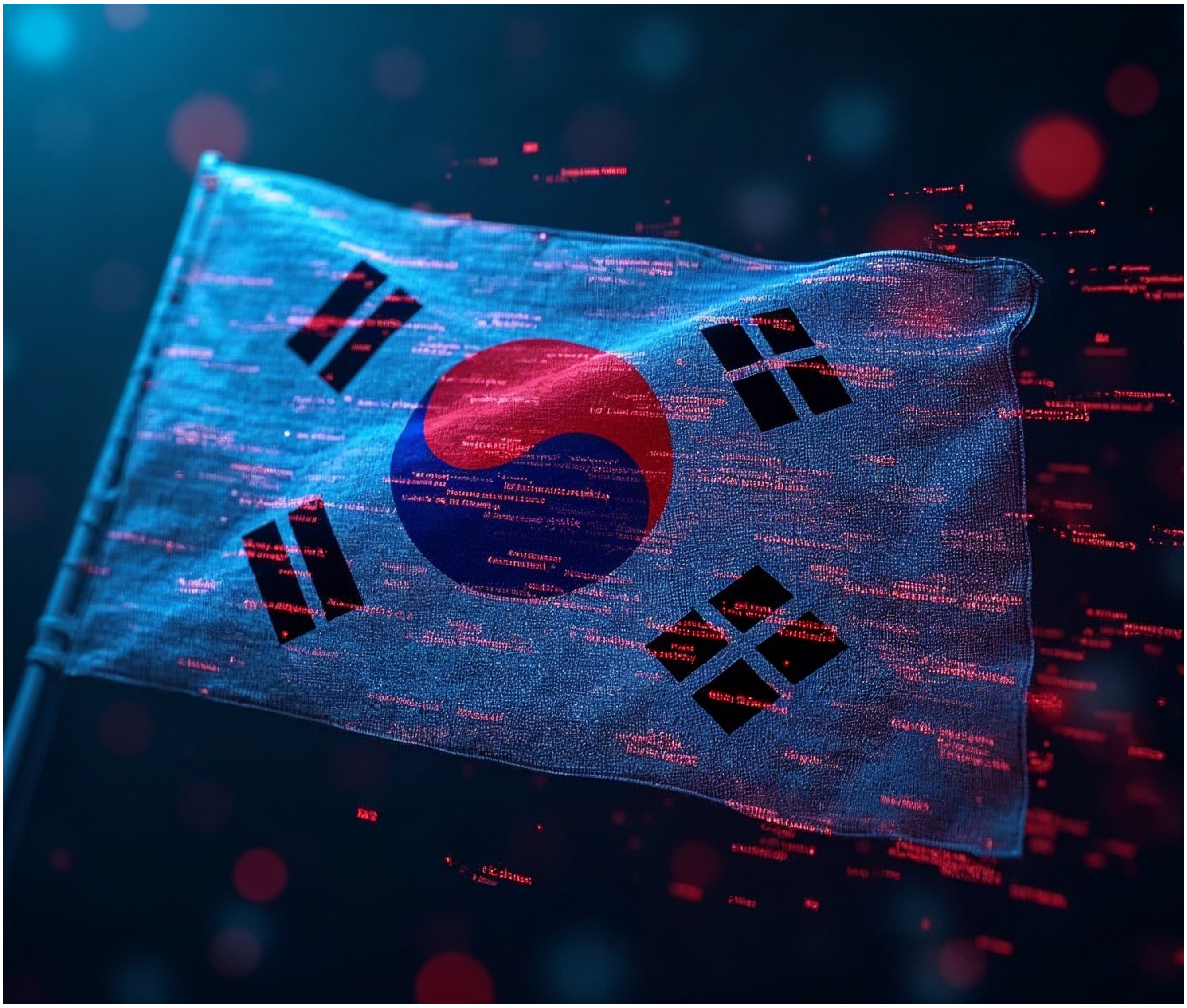
## Content

# Introduction

South Korea is a country in Eastern Asia occupying the southern half of the Korean Peninsula, bordering North Korea, the Sea of Japan, and the Yellow Sea. The nation has a predominantly mountainous terrain, with approximately three-quarters of the land covered by mountains. With a population of approximately 51.63 million as of 2022, South Korea faces significant population concentration challenges, with over 50% of residents living in the Seoul Capital Area. The country operates as a democratic republic with three independent branches of government: legislative, executive, and judicial. South Korea has made remarkable economic and technological progress in recent decades, positioning itself as a global leader in technological innovation. The country is particularly focused on advancing its artificial intelligence capabilities through strategic investments, regulatory frameworks, and public-private partnerships. This report examines South Korea's evolving landscape of AI governance, investment strategies, and innovation approaches between 2020 and 2025, providing insights into the nation's comprehensive efforts to establish itself as a global AI leader.



# 1. Recent Legal Regulations (2020-2025)

South Korea has actively developed its legal framework governing AI and data protection between 2020 and 2025, establishing a comprehensive regulatory landscape for the rapidly evolving technology sector.

The Personal Information Protection Act (PIPA), which went into effect on September 30, 2011, serves as South Korea's general law on personal data protection. In 2020, PIPA underwent significant amendments introducing specific obligations for organizations providing commercial information and communication services online, including strict notification and consent requirements for personal data processing. These amendments also introduced provisions allowing pseudonymized data to be processed without consent for statistics, research, and public records purposes. Additionally, the 2020 amendments established a general principle that data controllers should prioritize using anonymized data where possible, and pseudonymized data when anonymization cannot achieve processing purposes. A crucial institutional change was the reformation of the Personal Information Protection Commission (PIPC) structure and powers, establishing it as an independent, centralized data protection authority similar to its EU counterparts. The 2023 amendments to PIPA, effective from September 15, 2023, further aligned with the principle of "same conduct – same regulation" for all personal data controllers by removing special provisions that previously only applied to Online Service Providers.

On January 21, 2025, South Korea took a significant step by signing the Basic Act on Artificial Intelligence and Creation of a Trust Base, marking a pivotal advancement in establishing robust AI governance. This legislation, set to take effect on January 22, 2026, defines key AI concepts, outlines development principles, and introduces stringent oversight measures for high-impact AI systems.

The AI Basic Act defines AI as "an electronic implementation of intellectual capabilities that humans possess," encompassing learning, reasoning, perception, and judgment. It specifically identifies high-impact AI as systems with significant effects on human life, safety, or fundamental rights, such as AI used in healthcare, hiring, loan screening, or biometric analysis.

The law applies to any AI activities that impact the South Korean market, regardless of whether they originate domestically or overseas, with exceptions made for AI developed exclusively for national defense or security. The Act introduces fines of up to KRW 30 million (~$20,870) and potential imprisonment for violations, with detailed implementation plans to be developed by the Ministry of Science and ICT.

The AI Basic Act is also known as the South Korean AI Act (SKAIA) and consolidates 19 separate AI-related regulatory proposals. Unlike the EU's AI Act, which categorizes AI based on strict risk levels, South Korea's approach allows for more flexibility, ensuring that companies can continue to develop AI technology while adhering to safety and transparency standards. This approach is designed to be flexible and innovation-driven, reflecting South Korea's commitment to balancing technological advancement with responsible regulation.

In the public sector, the amended General Act on Public Administration allows administrative agencies to issue administrative dispositions using automated systems, providing legal grounds for AI use in government operations. For election security, the Public Official Election Act was amended on December 29, 2023, to prohibit the use of AI-generated deepfake images or videos that are difficult to distinguish from real footage in election campaigns.

Beyond formal legislation, South Korea has established various ethical guidelines and standards. In 2020, the South Korean government announced the AI Ethical Standards, laying out three fundamental principles and ten core requirements aimed at promoting 'humanity' as the highest value in human-centered AI. These principles include human dignity, societal public interest, and technological appropriateness. The ten core requirements encompass human rights, privacy, diversity, non-infringement, public interest, solidarity, data governance, accountability, safety, and transparency.

In December 2023, the Ministry of Science and ICT established the Requirements to Enhance Trustworthiness for AI Systems as a collective industry standard. This standard includes 15 requirements that stakeholders must meet throughout the entire lifecycle of AI systems, from risk management planning and implementation to providing explanations about service scope and interaction subjects.

## 2. Government AI Action Plan

South Korea has developed an ambitious and comprehensive AI action plan with the vision of becoming a world leader in AI, surpassing its traditional IT strengths. The National Strategy for Artificial Intelligence of Korea, established in December 2019, outlines a comprehensive plan to position Korea as a leading nation in the AI era. The strategy emphasizes regulatory flexibility, comprehensive support for AI startups, and the creation of a skilled workforce.

The government has set clear goals for 2030, including securing world-class AI competitiveness, enhancing economic and social vitality, and improving the quality of life and happiness of the people. More specifically, the National AI Committee aims to raise the deployment rate of AI in corporate and manufacturing sectors to 70 percent and 40 percent, respectively, by 2030.

The action plan is structured around core strategies and tasks focused on three main areas: establishing a global-leading AI ecosystem, making the best use of AI, and realizing people-centered AI. For ecosystem development, the government is working to enhance AI infrastructure by expanding data supply systems, securing high-performance computing resources, and building AI innovation clusters nationwide. To secure competitiveness in AI technology, the focus is on next-generation AI R&D, AI semiconductors, and comprehensive support for basic AI research and software.

Regulatory innovation is a key component of the strategy, with plans to transition to a negative regulatory system, establish future-oriented legal systems, and support the growth of the AI industry. The government is also nurturing global AI startups by increasing investment and support throughout their lifecycle, hosting global events, and creating a sustainable AI ecosystem.

A major focus of the action plan is developing world-class AI talent and educating people by reforming education to focus on software and AI, expanding AI literacy across all demographics, and creating lifelong learning opportunities in AI. This includes mandatory AI literacy courses for military personnel, public officials, and industry employees, with an emphasis on practical and interdisciplinary AI education.

At the institutional level, South Korea launched the Presidential Committee on AI (PCAI) in September 2024, where President Yoon Suk Yeol reiterated his administration's plans for Korea to become a top three global AI power by 2027. At this event, Korean companies pledged to invest $48.9 billion into AI development by 2027. In the same month, the Ministry of Science and ICT opened the Global AI Frontier Lab in New York City jointly with NYU, with investment commitments totaling $66 million through 2028.

In 2023, the Ministry of Science and ICT launched the AI Strategy High-Level Consultative Council, a governance body tasked with spearheading the nation's comprehensive AI innovation strategies. The council, led by ICT Minister Lee Jong-ho and Taejae University President Yeom Jae-ho, consists of 32 members including private-sector experts, representatives of IT companies, and director-level officials from government agencies. The council aims to enhance the country's capability to tackle issues such as low birthrate and stagnant growth through AI applications across various sectors.

In October 2024, the National AI Research Hub was launched as a central hub for collaboration in AI research between government and private sectors. The hub will receive KRW 94.6 billion (approximately USD 71 million) in funding through 2028 to ensure its sustainable development. Located at the Seoul AI Hub, it offers approximately 7,000 square meters of space, with plans to expand to 7,600 square meters by 2025. The hub aims to host researchers from institutions in various countries such as the United States, Canada, France, and the UAE for extended periods to engage in groundbreaking AI research.

The government is also establishing an AI Safety Institute in November to systematically address the risks of advanced AI, reinforcing its pursuit of joining the AI G3. To support these initiatives, the government aims to ensure balanced development in AI growth and safety by advocating for the prompt enactment of the AI Basic Act.

The economic impact of South Korea's AI strategy is expected to be substantial, with anticipated benefits of up to 455 trillion won by 2030 through AI-driven innovation and productivity gains. A study conducted with Bain & Company forecasts that the successful implementation of AI across various sectors could generate an annual economic impact of 310 trillion won by 2026. This includes an annual revenue increase of 123 trillion won attributed to AI-integrated new products and an annual cost reduction of 185 trillion won achieved through enhanced efficiency and automation.

## 3. Intellectual Property & Data Usage

South Korea's approach to intellectual property and data usage in the context of AI is governed by several key legal frameworks, primarily the Personal Information Protection Act (PIPA) and sector-specific regulations. These frameworks balance innovation with the protection of individual rights and privacy.

The PIPA serves as South Korea's general data protection law, comprehensively regulating the collection, use, and disclosure of personal information by both public and private entities. It establishes principles and requirements for proper data handling, including consent, transparency, security measures, and enforcement mechanisms. The law aims to protect individuals' rights and privacy while allowing organizations to collect and use personal information for legitimate purposes, creating a secure and transparent environment for data usage.

Under PIPA, personal information is defined as information relating to a living individual that identifies a particular individual, information which may be easily combined with other information to identify an individual, or pseudonymized information that becomes incapable of identifying an individual without additional information. Sensitive information, which requires additional protections, includes data concerning an individual's ideology, faith, labor union membership, political views, health, sexual orientation, genetic information, criminal records, and biometric data.

The law requires explicit consent for the collection and use of personal information, except in specific circumstances such as when processing is required by statute or necessary for contractual obligations. When obtaining consent, data controllers must inform data subjects about the purpose of collection and use, the items of personal information to be collected, the duration of retention, and the right to refuse consent. For cross-border transfers of personal information, consent is generally required, though exceptions exist for special provisions under laws or international agreements, delegation of processing necessary for agreements with data subjects, and transfers to recipients with adequate safety measures.

South Korea also has specific regulations for the collection and use of data for AI training. In August 2023, the Personal Information Protection Commission (PIPC) announced its "Policy Direction for Safe Use of Personal Information in the Age of AI". This policy aims to stimulate the AI industry while minimizing the risks of personal information breaches, with an emphasis on a principle-based regulatory approach. The PIPC's policy establishes comprehensive data processing standards and protective measures across all stages of the AI model/service lifecycle, including planning, data collection, training, and provision.

To facilitate innovation, the PIPC introduced a "privacy safe zone" system for the secure development and testing of AI technologies, along with a regulatory sandbox for AI and a pre-adequacy assessment system. In February 2024, the PIPC issued guidelines for the anonymization of unstructured data to assist its deployment in AI development. The PIPC plans to release several pivotal guidelines throughout the year to strengthen the regulatory framework for AI.

For financial data, the Credit Information Act governs the use of credit information and mainly applies to financial institutions. The Act introduced the Mydata license, which allows businesses to help individuals manage personal financial information scattered across various institutions in a single application. It acknowledges the right to data portability, enabling individuals to request the transmission of their credit information to Mydata businesses.

In the healthcare sector, data usage is regulated under the Medical Service Act (MSA) and the Bioethics and Safety Act (BSA). The MSA takes precedence over PIPA with respect to medical records of patients held by medical institutions. However, if patient data is pseudonymized, the MSA regulations may not apply, and the PIPA guidelines on pseudonymized information can be followed instead. The PIPC and the Ministry of Health and Welfare have jointly published guidelines for the utilization of healthcare data, explaining standards and procedures for pseudonymization.

South Korea is also addressing emerging issues related to AI and data usage. In financial services, AI is increasingly used in areas such as credit rating, loan screening, and personal marketing. To manage associated risks, the Financial Services Commission has issued guidelines requiring financial companies to prevent unreasonable discrimination against consumers and establish fairness standards based on service characteristics.

# 4. AI Outputs & IP Protections

South Korea's approach to intellectual property protection for AI outputs represents a careful balance between encouraging innovation and preserving the traditional understanding of creativity as a human endeavor. The country's legal framework addresses three main areas of concern: IP protection in AI model training, IP infringement by AI outputs, and IP protection of AI outputs themselves.

In the realm of AI training, challenges often arise during data collection, particularly when methods like web scraping are used to gather online content. This practice potentially infringes on the copyrights of original works such as images, texts, or programs. The Copyright Act does not explicitly allow the use of copyrighted materials for AI training, raising questions about the applicability of the fair use provision. There are ongoing academic discussions about whether fair use should apply to data used in AI training, with this area of law still developing and lacking direct legal precedents.

To address these concerns, an amendment to the Copyright Act introducing text and data mining (TDM) regulations is being considered. This amendment aims to allow the use of copyrighted works for AI training under specified conditions without explicit permission from copyright holders. While the legislative proposal is under review, it reflects efforts to adapt copyright laws to the evolving landscape of AI technology.

Regarding AI-generated works, South Korean legal interpretation does not recognize outputs created solely by AI as having copyright protection. Under the current legal framework, the end result of an AI's work is unlikely to be recognized as a work product, making it difficult to protect under copyright law. However, if an AI-created product is substantially similar to any existing work, it may infringe on the copyrights of others.

In December 2023, the Ministry of Culture, Sports and Tourism, along with the Korea Copyright Commission, published the Copyright Guide for Generative AI. In this guide, the ministry suggested that if human creativity is involved in modifying, enhancing, or arranging AI-generated works, those contributions may be eligible for copyright protection. This stance reflects an ongoing effort to reconcile the capabilities of AI with traditional frameworks of IP law.

The Copyright Act defines a "work" as a creative production that expresses human thoughts and emotions, and an "author" as "a person who creates a work". According to the Ministry of Culture, Sports and Tourism's Generative AI Copyright Guide issued in December 2023, an AI cannot be recognized as an author under current laws.

For AI models themselves, protection is available through patents for novelty and advancement. The source code implementing the AI model can be protected as computer program works. If an AI tool provider restricts the input method and usage of generative AI tools through service terms to prevent IP infringement, users who fail to comply may be liable for breach of terms.

The Ministry of Culture, Sports and Tourism has been working to prepare guidelines to resolve unclear matters under existing laws, such as whether using copyrighted work in AI training constitutes fair use and whether AI output can be recognized as a work under the Copyright Act. On December 27, 2023, the Ministry distributed the 'Guideline on AI Copyright,' which provides guidance on using copyrighted materials, including appropriate remuneration for materials used in AI training.

In the context of trade secrets, if any data considered as trade secrets of another person is collected without permission and used for AI learning, trade secret infringement issues may arise. Meanwhile, if technical data such as the source code of an AI model is kept confidential, it can be protected as a trade secret.

## 5. AI Investments & Computing Power

South Korea is making substantial investments in AI technologies and computing infrastructure, positioning itself as a major player in the global AI landscape. The government and private sector are collaborating on ambitious projects to enhance the country's AI capabilities and computing power.

President Yoon Suk Yeol has announced plans to invest 9.4 trillion won ($6.94 billion) in AI by 2027. This is part of a broader strategy to establish South Korea as one of the three leading nations in the world on AI. In September 2024, President Yoon announced that the country will invest 65 trillion won (approximately $49 billion) in AI projects over the next four years. These investments are aligned with the Korean Digital New Deal, which aims to lead digital transition by investing 58.2 trillion KRW by 2025 across various sectors.

The Ministry of Science and ICT (MSIT) revealed a 710.2 billion won ($527 million) investment plan for 2024, targeting 69 sectors to foster innovations propelled by artificial intelligence in daily lives, industries, and government administrative services. The ministry anticipates that this initiative will help propel South Korea to become one of the top three AI nations globally by strengthening its AI capabilities. A government-led study forecasts that the successful integration of AI across various sectors could generate an annual economic impact of 310 trillion won by 2026.

To enhance computing infrastructure, South Korea has unveiled plans to establish a "National Artificial Intelligence (AI) Computing Center" by 2027, backed by a joint public-private investment of 2.5 trillion won (US$1.7 billion). The initiative aims to enhance the country's competitiveness in AI technology by creating a computing facility with a capacity of 1 exaflop. The center will be developed through a special purpose company (SPC), with the public sector holding a 51% stake and private companies controlling the remaining 49%.

A key element of this strategy is securing high-performance GPUs, which are essential for AI research and development. South Korea plans to secure 10,000 high-performance GPUs by the end of 2025, strengthening its position in the global race for AI dominance. An additional 8,000 GPUs will be acquired by mid-2026 to support the sixth supercomputer. This initiative aims to supply GPUs through public-private partnerships, enabling the country to launch services at its upcoming national AI computing center. The center is expected to serve as a cornerstone for AI model development and training, offering essential resources to technology companies and research institutions.

The National AI Computing Center is expected to provide South Korea's research and industrial sectors with a world-class AI research and development environment. It is also anticipated to serve as a catalyst for innovation and growth in the domestic AI computing ecosystem, encompassing AI semiconductors, cloud computing, and AI-driven services. According to the MSIT, "Just as broadband networks served as the foundation for Korea's emergence as an ICT powerhouse, AI computing infrastructure will be a core national asset that supports innovation and growth in the AI transformation era".

In the private sector, significant investments are being made in AI and computing infrastructure. SK Hynix, the world's second-largest memory chip maker, will invest 103 trillion won ($74.6 billion) through 2028 to strengthen its chips business for AI applications. SK Telecom is planning a data center that will house 60,000 Graphic Processing Units (GPUs) with a power consumption capacity of 100 MW, with plans to expand the facility's capacity to 1 to 2GW in future.

An investor group is planning one of the world's largest data centers for artificial intelligence in South Korea, with a planned capacity of 3 gigawatts of power. If completed as envisioned, this data center will cost as much as $35 billion and pack up to 3 gigawatts of power, nearly three times the planned capacity of a data-center complex in Texas that OpenAI and SoftBank Group are funding. The project is planned in the country's southwestern region, with construction set to begin early 2025 and complete by 2028.

The AI market in South Korea is projected to reach US$4.34 billion in 2025, with the generative AI segment expected to reach US$1.24 billion in the same year. According to Statista, the local AI sector is predicted to experience a compound annual growth rate (CAGR) of about 14.9 percent, reaching an estimated KRW 4.5 trillion by 2027.

Despite these ambitious plans, South Korea faces challenges in developing its AI capabilities. The country's 2024 research and development budget saw a 14.7% cut—its first R&D budget cut in 33 years—although the government stressed continued support for "super gap" and critical emerging technologies. Another challenge is hiring enough skilled AI practitioners, as South Korea's population is declining steadily. Element AI's Global AI Talent Report 2020 indicates that the number of AI experts in South Korea is 2,551, far fewer than the 188,300 in the U.S., 76,213 in India, and 22,191 in neighboring China.

# 6. Judicial Decisions on AI

South Korea's judiciary has played a significant role in shaping the legal landscape for AI through several key decisions, particularly regarding intellectual property rights and the status of AI as inventors or creators.

A landmark case in this area is the DABUS patent case, which is concurrently taking place in multiple jurisdictions worldwide. Dr. Stephen Thaler filed patent applications with patent offices, stating DABUS, the AI he developed, as the inventor. In South Korea, the Korean Intellectual Property Office (KIPO) rejected the application on the grounds that, according to Article 33(1) of the Patent Act, only humans can be inventors, and therefore his AI does not qualify as an "inventor" under the Patent Act. The Seoul Administrative Court subsequently affirmed KIPO's decision.

On June 30, 2023, in this lawsuit filed by Stephen Thaler as part of the DABUS project seeking recognition of AI as an inventor, the Seoul Administrative Court ruled that "invention" under Article 2(1) of the Patent Act refers to the highly advanced creation of a technical idea using the laws of nature, and such a technical idea presupposes human reasoning. Therefore, under current laws, AI cannot be recognized to have the legal capacity to "invent". This case is currently under appeal at the Seoul High Court (2023Nu52088).

The Seoul Administrative Court's decision mentioned that it is difficult to conclusively find that recognizing AI as an inventor would necessarily contribute to technological and industrial developments within society, which may signal judicial reluctance to grant inventor status to an AI, even when considering the broader spirit of the Patent Act.

While no similar lawsuit has been filed in South Korea regarding AI authorship, the Ministry of Culture, Sports and Tourism (MCST) issued guidelines on generative AI copyright on December 27, 2023. According to these guidelines, under the Korean Copyright Act, which defines a "work" as creative expression of "human" thoughts and emotions, AI-generated works not reflecting human thoughts and emotions are not recognized as works under copyright law. AI-generated output is considered to be in the public domain and not subject to copyright protection. Human creators can use AI-generated output freely without obtaining permission or paying licensing fees.

The MCST's guidelines also address the issue of registration for works created with AI assistance. They take the position that it is not possible to register a human-created secondary work that used AI in its creation as such. Instead, it may be registered as a compilation work to the extent that the compilation work exhibits human creativity in the AI's selection and arrangement. However, the MCST announced that it may be premature to codify AI copyright provisions within the current copyright law regime.

In the context of automated decision-making, the Seoul Administrative Court's judgment (2022GuHap89524) dated June 20, 2023, defined artificial intelligence as a technology that realizes human brain functions through a computer. This definition encompasses perception, judgment, inference, problem-solving, and language functions. The court's broad and abstract definition includes both generative AI and predictive AI within the scope of "realizing human brain activities through a computer".

Regarding data privacy and ethical considerations, several regulatory bodies have issued guidelines that may influence future judicial decisions. The Personal Information Protection Commission (PIPC) has been particularly active in this area, issuing guidelines on automated decision-making under the amended Personal Information Protection Act. These guidelines emphasize transparency, requiring the disclosure of individual variables in artificial intelligence to data subjects, although they do not necessitate explaining the specific operation method of the algorithm.

The Korea Fair Trade Commission (KFTC) has initiated work to publish a report on the AI market by the end of 2024, examining issues such as algorithmic collusion or disadvantages for content providers. This report may inform future judicial decisions on competition and fair-trade issues related to AI.

In the legal sector, AI adoption has been limited, but some developments are occurring. A medium-sized law firm in Korea introduced an AI-based legal counseling chatbot service in March 2024, in collaboration with Naver Cloud and Nexus AI. The Prosecutor's Office is planning to develop a service that recommends court records of similar cases as part of the next-generation Korea Information System of Criminal Justice Services (KICS) project. Courts plan to apply an automatic judgment recommendation AI model within the next-generation electronic litigation system, scheduled for launch in September 2024.

# Conclusion

South Korea has established itself as a forward-thinking nation in the realm of artificial intelligence, implementing a comprehensive and multifaceted approach to AI governance, investment, and innovation between 2020 and 2025. The country has developed a robust legal framework through amendments to the Personal Information Protection Act and the introduction of the AI Basic Act, creating a balanced regulatory environment that encourages innovation while ensuring ethical use of AI technologies. South Korea's approach is characterized by its flexibility and innovation-driven philosophy, contrasting with more stringent regulatory models like the EU AI Act.

The government's ambitious AI action plan reflects a clear vision to position South Korea among the world's top three AI powers by 2027, with well-defined strategies and substantial investments. The establishment of key institutions such as the Presidential Committee on AI, the National AI Research Hub, and the planned National AI Computing Center demonstrates South Korea's commitment to creating a robust AI ecosystem. The country's comprehensive strategy encompasses talent development, infrastructure enhancement, regulatory innovation, and industry support, addressing all aspects of AI advancement.

In the realm of intellectual property and data usage, South Korea has carefully balanced innovation with protection of individual rights. The legal framework addresses the complexities of using data for AI training while safeguarding privacy and intellectual property. The country's stance on AI outputs and IP protections reflects a traditional understanding of creativity as a human endeavor, while recognizing the potential contributions of AI as a tool in creative processes.

South Korea's investments in AI and computing power are substantial, with commitments from both government and private sector totaling tens of billions of dollars. Projects like the planned 3-gigawatt AI data center and the acquisition of thousands of high-performance GPUs aim to provide the infrastructure needed for advanced AI research and development. These investments reflect South Korea's understanding that computing capacity is a critical determinant of AI leadership in the global landscape.

Judicial decisions on AI, particularly regarding inventorship and copyright, have reinforced the human-centric approach to intellectual property while providing clarity on the legal status of AI systems. These rulings, along with guidelines from various ministries and regulatory bodies, are shaping the legal landscape for AI in South Korea.

Despite challenges such as R&D budget constraints and shortage of skilled AI practitioners, South Korea's strategic focus on AI positions the country to become a global leader in AI technology and applications. The anticipated economic impact of these efforts is substantial, with projections indicating that successful AI implementation could generate hundreds of trillions of won in annual economic benefits.

As South Korea continues to evolve its AI governance, investment, and innovation strategies, the country serves as an important model for balancing technological advancement with ethical considerations and regulatory oversight. The nation's comprehensive approach to AI development highlights the importance of coordinated efforts across government, industry, academia, and civil society to harness the transformative potential of artificial intelligence while addressing its challenges.

NewMind AI Journal

# Country AI Policies, Regulations and Strategies Report

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