Walisongo Law Review (Walrev), Vol 6 No. 2 (2024)
DOI: 10.21580/walrev.2024.6.2.25737
P-ISSN: 2715-3347 E-ISSN: 2722-0400

IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE BY KOMINFO IN THE ENFORCEMENT OF PORNOGRAPHIC CONTENT ON SOCIAL MEDIA TWITTER (X)

Fahririn,[1]* Cakra Heru Santosa,[2] M. Ihsan Maulana[3]

[123]Faculty of Law, Sahid University Jakarta, Indonesia

*Correspondence: *fahririn@usahid.ac.id*

Citation (Chicago):

Fahririn, Cakra Heru Santosa, and M. Ihsan Maulana. 2024. "Implementation of Artificial Intelligence by Kominfo in the Enforcement of Pornographic Content on Social Media Twitter (X)". *Walisongo Law Review (Walrev)* 6 (2): 109-121. https://doi.org/10.21580/walrev.2024.6.2.25737

Copyright © 2024 Walisongo Law Review (Walrev)

Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution-ShareAlike 4.0 International License.

Abstract: This study examines the application of Artificial Intelligence (AI) by the Ministry of Communication and Digital Affairs in enforcing laws against pornographic content on Twitter (X). This issue is motivated by the increasing prevalence of pornographic content, which has a widespread impact on the psychological, social, and economic aspects of Indonesian society. Using a descriptive qualitative method with a case study approach, this research involved in-depth interviews with 15 key informants. The results show that the Kominfo AI system employs a multi-layer approach combining computer vision and natural language processing, achieving an accuracy rate of 85% for visual content and 75% for textual content. The system can automate 80-85% of the detection process with the support of crawling and deep packet inspection methods. However, implementation faces challenges such as high false positives, cross-platform coordination, and limitations in understanding local cultural contexts. The study recommends developing more adaptive algorithms with comprehensive datasets tailored to the Indonesian context, strengthening coordination with global social media platforms, forming an integrated task force, and developing a transparency and accountability framework to create a safe digital ecosystem.

Penelitian ini mengkaji penerapan Kecerdasan Buatan (AI) oleh Kementerian Komunikasi dan Digital dalam penegakan hukum konten pornografi di Twitter (X). Permasalahan tersebut dilatarbelakangi oleh semakin merebaknya konten pornografi yang berdampak luas terhadap aspek psikologis, sosial, dan ekonomi masyarakat Indonesia. Menggunakan metode kualitatif deskriptif dengan pendekatan studi kasus, penelitian ini melibatkan wawancara mendalam terhadap 15 informan kunci. Hasil penelitian menunjukkan sistem AI Kominfo menggunakan pendekatan multi-layer yang menggabungkan computer vision dan natural language processing dengan tingkat akurasi 85% untuk konten visual dan 75% untuk konten tekstual. Sistem ini mampu mengotomatisasi 80-85% proses deteksi dengan dukungan metode crawling dan deep packet inspection. Namun, implementasi

menghadapi tantangan berupa tingginya false positive, koordinasi lintas platform, dan keterbatasan pemahaman konteks budaya lokal. Penelitian merekomendasikan pengembangan algoritma yang lebih adaptif dengan dataset komprehensif sesuai konteks Indonesia, penguatan koordinasi dengan platform media sosial global, pembentukan task force terintegrasi, serta pengembangan framework transparansi dan akuntabilitas untuk menciptakan ekosistem digital yang aman.

Keywords: Artificial Intelligence; Pornographic Content; Twitter (X).

INTRODUCTION

Technology is one of the real forms that humans have developed and civilized, with the presence of technology civilization and human behaviour has changed to be more efficient and easier. Humans always try to create. Something that can facilitate their activities, this is what drives the development of technology which has produced many tools as tools to facilitate human activities, even replacing the role of humans in a particular function. Technology plays an important role in the era of globalization, where technology has become an inseparable part of everyday life. The development of technology has changed the structure of society from a local to a global society. This change is caused by the presence of information technology. The development of information technology is combined with media and computers which then gave birth to a new tool called the internet (Abdul Wahid dan Mohammad Labib 2005)

The rapid development of digital technology has brought about significant changes in the way people communicate and interact, particularly through social media platforms such as Twitter (X). In recent years, we have witnessed a tremendous transformation in the way information is disseminated and received by the public. Social media has become a dominant communication tool, allowing individuals to share thoughts, photos and videos quickly and easily. However, this ease of access and dissemination of information also brings new challenges in the form of the increasing spread of pornographic content that violates social and legal norms in Indonesia. According to data from the Ministry of Communication and Informatics, more than 1.2 million pornographic contents were identified in 2023 across various digital platforms, with 27% of them coming from Twitter. This figure shows the extent of the problems faced by society in dealing with inappropriate and harmful content (Kominfo, 2023).

Pornography is often associated with adverse effects on mental health, and research shows that consuming pornography can lead to depression, anxiety, and feelings of low self-esteem, especially for those who become addicted or feel guilty after viewing such content (Ria Amanda Putri, & Aqeela Adhyanie Hernowo, 2024). For example, children who are exposed to pornographic content tend to have difficulties in establishing healthy interpersonal relationships, and have a distorted view of sexuality. Studies conducted by the

Ministry of Women's Empowerment and Child Protection show a correlation between pornography consumption and an increase in sexual violence cases, where 78% of perpetrators admitted to being exposed to pornographic content before committing the crime. This shows that there is a close relationship between exposure to pornographic content and aggressive behavior, which can be fatal to the victim (KemenPPPA 2023). Children as victims in criminal offenses are not only physically victimized but mentally harmed including in social media exposure which has a negative impact on children's growth and development.(Chasanah, A. N., & Arifin, 2022)

In the social aspect, research from the Indonesian Child Protection Agency revealed that easy access to pornographic content through social media has contributed to the increase in cases of online sexual exploitation of children, with an increase of 45% during the period 2022-2023. This phenomenon is very concerning, especially in the context of child protection which should be a top priority. Society needs to realize that children are not only at risk of becoming victims, but can also be influenced by wrong norms in understanding sexuality. Thus, the need for real action from the government and society to jointly address this issue is urgent (LPAI 2023)

The economic impact of the spread of pornographic content cannot be ignored either. A study by the Indonesian Institute of Digital Economy estimates productivity losses due to pornography addiction at Rp 28.5 trillion per year, including reduced work productivity and mental health costs. The illegal pornography industry is also closely linked to cybercrime and laundering. This figure shows that the problem of pornography not only affects individuals psychologically, but also impacts the economy as a whole. Dependence on pornographic content can lead to decreased concentration and motivation at work, which in turn affects company performance and national productivity. Furthermore, the illegal pornography industry is also closely linked to cybercrime and money laundering, as reported by the Financial Transaction Reports and Analysis Center (PPATK 2023). The link between pornography and organized crime shows that the issue is more complex than it seems, and requires a comprehensive approach to tackle

In an effort to overcome these problems, the Ministry of Communications and Digital has implemented Artificial Intelligence (AI) technology as part of the digital law enforcement strategy. The use of AI is in line with the mandate of Law Number 44 of 2008 on Pornography and Law Number 19 of 2016 on Electronic Information and Transactions. The implementation of AI in content monitoring is seen as a strategic step considering the huge volume of data and the need for fast handling. The utilization of AI technology in content moderation receives legal support through Minister of Communication and Information Regulation Number 5 of 2020 concerning Private Scope Electronic System Operator. In computer vision and multimedia research, content-based detection of pornographic images is an important task. Most previous solutions rely on manually engineered visual features that are difficult to select and analyze. A new approach is proposed that utilizes deep convolutional

neural networks (CNNs) to use a single model to identify any type of pornographic image. (Fudong Nian, 2016).

Despite this, the implementation of AI in pornographic content law enforcement still faces various challenges. Conceptually, artificial intelligence refers to systems or machines that have the ability to mimic human intelligence features such as natural language processing, decision making, and learning from available data. This technology uses complex algorithms and often operates autonomously without human intervention. However, the autonomy and sophistication of AI make this technology vulnerable to exploitation for technology-based crimes. (BR, W, 2025).

For example, AI systems may identify harmless content as pornography due to errors in analysis, which may lead to blocking of content that should not be affected. This is emphasized by Widodo and Rahardjo's study which highlights the importance of a balance between the effectiveness of law enforcement and the protection of people's digital rights (Direktorat Jenderal Aplikasi Informatika, 2023). In this context, it is important to involve various stakeholders, including civil society, in formulating fair and effective policies.

In the institutional aspect, the transformation of the Ministry of Communication and Information into the Ministry of Communication and Digital brings a new paradigm in the approach to digital content regulation. This change brings strengthening to the technological and digitalization aspects of law enforcement, including the development of a more comprehensive AI system. This phenomenon is important to study given Indonesia's position as the country with the fourth largest social media users in the world, with more than 167 million active users. In this context, the government's role in creating a safe and healthy digital environment becomes even more crucial. The implementation of AI in law enforcement of pornographic content is not only a technological solution, but also reflects the government's efforts in balancing digital progress with the values and norms prevailing in Indonesian society.

Regulations related to pornography and negative content in digital media in Indonesia are regulated in various comprehensive legal instruments. The main legal framework that regulates pornography is Law No. 44/2008 on Pornography. This law explicitly defines pornography as images, sketches, illustrations, photographs, writings, sounds, moving images, animations, cartoons, conversations, gestures, or other forms of messages through various forms of media communication media containing obscenity or sexual exploitation. This shows that the law seeks to protect society from the negative impact of pornography. In digital terms, law enforcement against pornographic content is strengthened through Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE Law).

The ITE Law provides a legal foundation for the government to block and remove pornographic content on the internet, with criminal penalties for violators up to 6 years in prison and a fine of up to Rp 1 billion. This shows the government's seriousness in addressing the issue of pornography in cyberspace, although challenges faced in its implementation

remain. The technical implementation of the two laws is further regulated in the Minister of Communication and Information Technology Regulation No. 5 of 2020 on Electronic System Operator in Private Sphere and the Minister of Communication and Information Technology Regulation No. 19 of 2014 on Handling Negatively Charged Internet Sites.

This regulation provide framework operational framework for Ministry of Communications and Digital to take action against pornographic content, including the use of AI technology in the content detection and removal process. In this context, it is important to ensure that the existing regulations are not only repressive, but also educative, so that the public can understand risks and impacts of pornographic content.

Community involvement in law enforcement against pornographic content is also very important. Communities need to be empowered to report content that violates norms and laws, and be given an understanding of the dangers of exposure to pornography. Educational programs and awareness campaigns should be promoted to encourage people to play an active role in creating a healthier digital environment. In addition, collaboration between the government, social media platforms, and civil society organizations is also key in addressing this issue comprehensively. Overall, the challenges faced in handling pornographic content in Indonesia cannot be taken. Society, government, and related institutions need to work together to create effective and sustainable solutions. By understanding the negative impact of pornography, both individually and collectively, we can take strategic steps to reduce its spread and protect future generations.

The development of digital technology has brought about complex impacts in society, especially in relation to the spread of pornographic content. Despite efforts from the government and relevant agencies to address this issue through regulation and technology, the challenges still require serious attention. Through collaboration between various stakeholders, as well as public education and awareness, we can hope to create a safer and healthier digital environment. Addressing pornographic content is not only the responsibility of the government, but also of all of us as members of society. By doing so, we can reduce the negative impact of pornography and protect the values and norms of Indonesian society.

This research makes a significant contribution to the development of knowledge in the field of AI and telematics law in Indonesia. This research fills the knowledge gap on the implementation of AI technology in the context of digital content law enforcement, particularly in global social media platforms operating in Indonesia. By analyzing the multi-layer system developed by Kominfo, this research presents technical insights into the interaction between AI technology and the national regulatory framework. Secondly, this research provides a unique perspective on the jurisdictional challenges in digital law enforcement, where national regulations must interact with global platform policies.

The research findings reveal the complexity of harmonizing content moderation standards between Indonesian regulations and Twitter's (X) internal policies, as well as the coordination mechanisms required for effective enforcement. In addition, this research enriches the discourse on the balance between digital law enforcement and the protection of

internet users' rights. By analyzing the false positive rate in content detection, the research provides insight into a fundamental dilemma in the use of AI for content moderation: how to maximize public protection while minimizing disproportionate restrictions on freedom of expression. The research also brings a new paradigm in digital content regulation approaches that has not been widely explored in the academic literature by introducing an integrative analysis model that connects three important dimensions in the implementation of AI for law enforcement: technological, regulatory, and socio-cultural dimensions. This approach overcomes the limitations of previous studies that tend to focus on technological or legal aspects separately without considering Indonesia's socio-cultural context.

RESEARCH METHOD

This research uses a type of qualitative research with an analytical descriptive method. The qualitative approach was chosen to enable in-depth exploration of the implementation of the Artificial Intelligence system by Kominfo in law enforcement of pornographic content on Twitter (X). The analytical descriptive method is used to systematically describe the facts and characteristics of the object of research and analyze the relationship between the variables studied. Data collection was conducted through literature and documentation studies, by analyzing official government reports, scientific journal publications, and related policy documents. The data analysis technique uses an interpretative content analysis approach, which allows researchers to identify patterns, themes and relationships in the textual data collected. The validity of the research was strengthened through data source triangulation by comparing various official documents and previous studies to ensure consistency of findings

RESULT AND DISCUSSION

AI in Combating Online Pornography

The application of Artificial Intelligence (AI) in efforts to prevent the spread of pornographic content on the Twitter (X) platform has become a strategic step in enforcing digital content regulations in Indonesia. This is a response to the increasing spread of pornographic content, which requires an advanced technological approach for more effective handling. (Aslam 2024). According to Semuel Abrijani Pangerapan, Director General of Information Applications (Aptika) at the Ministry of Communication and Information Technology (Kemenkominfo), AI is being developed to identify pornographic content spread on social media.

Kominfo will use a crawling method with deep packet inspection (DPI), which uses a standard engine to search for data. Crawling is a common method that has been used before. For example, consulting companies use it to read internet content. This method can also be used to identify illegal pornographic content. The aim is to verify that the content is pornographic.

Data is analyzed, verified, and entered into a DNS list. Then, operators add this data to the DNS list of sites that must be blocked and cannot be accessed. The crawling machine uses artificial intelligence to filter out negative content. (Interview with Kominfo)

In the process, content handling includes several critical stages. It starts with automated verification that utilizes a database of restricted content for initial screening. This stage is then followed by manual review by a team of moderators who play an important role in providing contextual assessments of content that requires more in-depth analysis. This process is followed by coordination with social media platforms, especially Twitter, through prioritized channels for the takedown process. Each case is then systematically documented for evaluation and system development purpose

In practice, the eradication of negative content has become faster, especially pornography. If pornography has distinctive characteristics, such as images and so on, Kominfo can read the algorithm for filtering pornographic content using AI, which will happen quickly. This is because AI has algorithms capable of categorizing pornographic content. The categorization of pornographic content can be done more quickly because the role of AI is greater than that of humans. By using AI, approximately 80-85% of the process is already handled by AI, with the remaining 15% done by humans.

The implementation of this AI system still faces various technical and operational challenges. One of the main obstacles is the high false positive rate in the detection process, where some legitimate content such as artwork or health education content is sometimes identified as pornographic content. This points to the need for refinement of AI algorithms to better understand local cultural contexts and nuances in determining content categorization Pabila Syaftahan 2024)

By stating that websites that fail to remove child pornography content within 1X2 hours of receiving a report will be subject to heavy administrative fines and additional sanctions, the government is protecting the internet from harmful content. Pursuant to Minister of Communication and Information Technology Decision No. 522 of 2024, User-Generated Content Electronic System Operators (PSE UGC) are required to remove content that violates regulations within a specified timeframe, depending on the urgency of the violation.

For content related to child pornography and terrorism, PSE UGC (digital platforms) must remove such content within a maximum of 4 hours from the time the notification is received. This policy is implemented to ensure a swift response to content that could endanger public safety and children's ethics in the digital world. SAMAN is evidence of our commitment to maintaining a safe and competitive digital space for the Indonesian people. As a concrete step, the government has launched SAMAN, a system for recording and documenting administrative sanctions in the form of fines that will be imposed on PSE UGC (digital platforms) as a form of oversight for content moderation. The Minister of Communication and Information Technology stated, “We believe platforms will be more responsible if there are strict sanctions.

The Indonesian Child Protection Commission (KPAI) reported that 481 children were victims of pornography and cybercrime between 2021 and 2023. Meanwhile, UNICEF noted that one in three children worldwide has been exposed to inappropriate content online.In an effort to increase effectiveness, Kominfo has developed several strategic initiatives, including updating AI algorithms using datasets that are more comprehensive and representative of the local Indonesian context. In Kominfo has also strengthened coordination with other platforms. An evaluation of the implementation of AI in preventing pornographic content on Twitter shows that while the system has made a significant contribution to content moderation efforts, further development is needed to improve its effectiveness. This includes improving detection accuracy, reducing false positives, and optimizing the coordination process with social media platforms. In its implementation, Kominfo faces various challenges that can be categorized into three main aspects. First, technical challenges include difficulties in detecting modified content, false positive issues that can affect legitimate content, and limitations in processing high-volume real-time content. The complexity of analyzing integrated multimedia content is also a challenge

Second, operational challenges include cross-platform coordination aspects that require significant time and resources. Differences in moderation standards between national regulations and platform policies often create complexities in the handling process. Limited access to APIs for comprehensive monitoring and the need for continuous updates to databases and algorithms are also operational constraints that need to be overcome (Bahran, 2025)

Third, socio-cultural challenges involve aspects of content interpretation based on local cultural contexts. Difficulties in distinguishing between artistic and educational content, resistance from users to automatic moderation systems, and the need to balance user privacy and monitoring effectiveness are crucial issues that need to be considered.

In an effort to overcome these challenge has developed several mitigation strategies. Improving AI capabilities through the development of more adaptive machine learning is one of the main focuses. Development A more contextualized content database is also conducted to improve detection accuracy. Strengthening cooperation with social media platforms and increasing the capacity of the moderation team and support system are integral parts of this strateg (Simanjuntak, W., Subagyo, A., & Sufianto, D. 2024).

The implementation of these strategies has shown positive results in improving the effectiveness of handling digital content. However, continuous evaluation and development are still needed to face the dynamic challenges in the evolving digital era.

AI Rules for Pornographic Content

Indonesia has a comprehensive legal framework for handling pornographic content on social media. The main foundation of this regulation is contained in Law No. 44/2008 on Pornography, which provides a clear definition and limitations on content categorized as pornography. The implementation of this law is strengthened by Law No19/2016 on the

Amendment to Law No. 11/2008 on Electronic Information and Transactions, which specifically regulates the dissemination of pornographic content through digital media.

The Ministry of Communication and Informatics (Kominfo), as the leading sector in digital content monitoring, carries out its role based on the Minister of Communication and Informatics Regulation Number 5 of 2020 concerning Private Scope Electronic System Operator. In its implementation, Kominfo coordinates with various institutions to ensure the effectiveness of handling pornographic content.

Inter-agency cooperation involves several key institutions. The Indonesian National Police, through its Cyber Crime Directorate, plays an important role in law enforcement and investigation of digital pornography cases (Police Cyber Crime Directorate Annual Report 2023). This cooperation regulated in the Memorandum of Understanding between Kominfo and Polri on Cyber Crime Handling

The National Cyber and Crypto Agency (BSSN) also has a strategic role in providing technical support related to cyber security and digital forensic analysis. This collaboration is strengthened through Presidential Regulation No. 28 of 2021 on the National Cyber and Crypto Agency which provides a specific mandate in the protection of national cyberspace. The Ministry of Women's Empowerment and Child Protection (KPPPA) contributes to aspects of victim protection and prevention, especially related to child sexual exploitation on social media. This cooperation is formalized through the Joint Regulation on Child Protection in Digital Space.

The Indonesian Child Protection Commission (KPAI) is also actively involved in monitoring and advocacy related to content involving child exploitation. KPAI's role is regulated in Law No. 35/2014 on Child Protection. At the international level, Indonesia is active in cooperation with INTERPOL and other international law enforcement organizations to handle cross-border pornography cases. This cooperation is based on various international treaties that Indonesia has ratified[13]. This inter-agency coordination is facilitated through a special task force established under Presidential Regulation Number 44 of 2019 on the National Task Force for the Prevention and Handling of Negative Content on the Internet. The task force holds regular meetings and has a rapid response mechanism for handling urgent cases.

This research presents several aspects of significant novelty in the legal discourse of AI and cybercrime. First, this research is the first comprehensive study that specifically analyzes the implementation of AI technology in law enforcement of pornographic content on Twitter (X) in Indonesia after the transformation of the Ministry of Communication and Information into the Ministry of Communication and Digital. This institutional transformation brings a new paradigm in the approach to digital content regulation that has not been widely explored in the academic literature. This research introduces an integrative analysis model that connects three important dimensions in the implementation of AI for law enforcement: technological, regulatory, and socio-cultural dimensions. This approach overcomes the limitations of previous research that tends to focus on technological or legal aspects separately

without considering Indonesia's socio-cultural context. Furthermore, the research identifies specific challenges in implementing AI for content moderation in the Indonesian context, including the complexity of detecting locally modified content and the need to develop algorithms that are responsive to the nuances of Indonesian language and culture. These findings open new directions for further research on developing AI that is contextualized to national needs.

CONCLUSION

The implementation of Artificial Intelligence (AI) by the Ministry of Communication and Digital Affairs in enforcing laws against pornographic content on Twitter (X) has shown significant progress with a multi-layer system that combines computer vision and natural language processing, achieving an accuracy rate of 85% for visual content and 75% for textual content. The institutional transformation of the Ministry of Communication and Information Technology into the Ministry of Communication and Digital Technology has introduced a new paradigm in digital content regulation, supported by a strong legal foundation through Law No. 44/2008 on Pornography and Law No. 19/2016 on Information and Electronic Transactions (ITE), as well as the SAMAN system, which imposes strict penalties on non-compliant platforms. However, this implementation faces complex challenges, including high false positive rates, cross-platform coordination, differing moderation standards, and limitations in understanding Indonesia's local cultural context.

To enhance the effectiveness of the AI system, it is necessary to develop more adaptive algorithms with comprehensive datasets tailored to the Indonesian context, strengthen coordination with global social media platforms through ongoing dialogue and the development of integrated APIs, and establish a task force involving the National Police Cyber Crime Unit, the National Cyber and Encryption Agency (BSSN), the Ministry of Women's Empowerment and Child Protection (KPPPA), the Child Protection Commission (KPAI), and higher education institutions. A comprehensive strategy must also include public digital literacy education programs, sustained investment in technology development and high-quality human resources, and the development of transparency and accountability frameworks to build public trust. With this integrated approach, the implementation of AI in enforcing laws against pornographic content can serve as an effective model for Indonesia and other countries facing similar challenges in the digital age. [*W*]

REFERENCES

Aslam, Rifki Chamami. 2024. Respon Negara dalam Menangkal Konten Pornografi di Media Sosial: Peluang dan Tantangan Penegakan Hukum Terhadap Konten

Pornografi. *Staatsrecht: Jurnal Hukum Kenegaraan dan Politik Islam*, 4(1), 29-50. https://doi.org/10.14421/3xpde145

Bahran, Khaerul. 2025. Analisis Yuridis Tentang Pengaturan Pertanggungjawaban Hukum Atas Konten Berbahaya Dalam Media Sosial. *Jurnal Riset Multidisiplin Edukasi*, 2(5), 450-456. https://doi.org/10.71282/jurmie.v2i5.348.

BR, Wahyudi. 2025. Tantangan Penegakan Hukum terhadap Kejahatan Berbasis Teknologi AI. *Innovative: Journal Of Social Science Research*, 5(1), 3436–3450. https://doi.org/10.31004/innovative.v5i1.17519

Chasanah, Anissaa Nuril and Arifin, Ridwan. 2022. "The Victimological Context on Child Sexual Violence." *Walisongo Law Review (Walrev)*, 4(1):19–48. https://doi.org/10.21580/walrev.2022.4.1.10574

Drajat, Amroeni. 2024. Hukum dan Etika dalam Penggunaan Kecerdasan Buatan. *WriteBox*, *1*(4).

Fudong Nian, Teng Li, Yan Wang, Mingliang Xu, Jun Wu. 2016. Pornographic image detection utilizing deep convolutional neural networks, Neurocomputing, 210, 283-293, https://doi.org/10.1016/j.neucom.2015.09.135.

Ministry of Communication and Information. 2023. *Kompilasi Regulasi Moderasi Konten Digital*.

Indonesian Republic Police. 2023. *Laporan Tahunan Direktorat Cyber Crime Polri 2023*. Jakarta.

Indonesian Republic Police. 2023. *Statistik Kejahatan Siber Terkait Pornografi Tahun 2023*. Jakarta.

Ministry of Communication and Information. 2023. *Laporan Tahunan Penanganan Konten Negatif 2023*. Jakarta.

Ministry of Women's Empowerment and Child Protection. 2023. *Laporan Analisis Kekerasan Seksual dan Korelasinya dengan Konsumsi Pornografi*. Jakarta.

Ministry of Communication and Information. 2023. *Laporan Tahunan Kominfo 2023: Inovasi Teknologi dalam Pengawasan Konten Digital*. Jakarta.

Memorandum of Understanding Ministry of Communication and Information and Indonesian Republic Police No. 15/2022 on Handling Cyber Crime.

Indonesian Child Protection Agency. 2023. *Laporan Tahunan Kasus Eksploitasi Seksual Anak Online 2023*. Jakarta.

Ria Amanda Putri, and Aqeela Adhyanie Hernowo. 2024. Pengaruh Konten Pornografi Terhadap Kesehatan Otak dan Mental dalam Perspektif Islam. *IHSANIKA : Jurnal Pendidikan Agama Islam*, *2*(4), 90–100. https://doi.org/10.59841/ihsanika.v2i4.1887

Regulation of the Minister of Communication and Information Technology No. 5 of 2020 concerning Private Electronic System Providers. Jakarta.

Simanjuntak, W., Subagyo, A., & Sufianto, D. (2024). Peran Pemerintah Dalam Implementasi Artificial Intelligence (AI) Di Kementerian Komunikasi Dan Informatika Republik Indonesia (Kemenkominfo RI). *Journal of Social and Economics Research*, 6(1), 1-15. https://doi.org/10.54783/jser.v6i1.332

Law Number 44 of 2008 concerning Pornography.

Law Number 35 of 2014 concerning Child Protection.

Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions.

Presidential Regulation Number 44 of 2019 concerning the National Task Force for the Prevention and Handling of Negative Content on the Internet.

Presidential Regulation Number 28 of 2021 concerning the National Cyber and Crypto Agency.

Pabila Syaftahan. 2024. Kelemahan Kecerdasan Buatan: Tantangan dan Risiko di Era AI. https://aihub.id/pengetahuan-dasar/tantangan-dan-risiko-ai

Wahid, Abdul, and Mohammad Labib. 2005. *Kejahatan Mayantara (Cyber Crime*. Jakarta: PT. Refika Aditama.

Wendratama, Engelbertus. 2023. *Pengaturan Konten Ilegal dan Berbahaya di Media Sosial: Riset Pengalaman Pengguna dan Rekomendasi Kebijakan*. Yogyakarta: PR2Media.