POLICY REPORT

September 2025

Navigating Public Opinion on AI in Singapore

Awareness, Perceptions and Vulnerabilities

Karryl Kim Sagun Trajano, Seth Seet Kai, Ysa Marie Cayabyab, Edson Tandoc Jr.

RSiS S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES
Nanyang Technological University, Singapore

Ponder the Improbable since 1996

Table of Contents

Executive Summary

This policy report examines public perceptions of artificial intelligence (AI) in Singapore amid the ongoing advancement of the technology. Public opinion is increasingly significant due to the threat of cognitive warfare, where sentiment can be weaponised to influence behaviour. Through a national online survey of adult residents in Singapore, the report explores AI diffusion, awareness and perceptions that could lead to vulnerabilities in the city-state. Findings reveal some gaps in public awareness, a growing AI divide, and concerns about harm and ethics. Strengthened governance and public engagement can be crucial to maximise AI's potential while ensuring public safety and security.

Introduction

This policy report is part of a wider examination of expert and public perceptions on key emerging technologies in Singapore. The rise of these technologies presents complex and pressing challenges, requiring time-sensitive yet evidence-based development of effective strategies to manage associated risks and mitigate potential vulnerabilities.

In this report, we study public opinion on artificial intelligence (AI) in Singapore. Public opinion on security issues can be easily relegated to the sidelines, particularly on matters such as emerging technologies, where expert perspectives (e.g., industry leaders, academic researchers, government officials) typically dominate.[1] However, the rise of cognitive warfare,[2] where public opinion is weaponised to influence mass behaviour, makes monitoring public sentiment more crucial. Without a clear understanding of public opinion, policy experts may not recognise the vulnerabilities that Singapore residents face in this new field of conflict. As Singapore aspires to lead on AI innovation, the city-state must ensure that technological development does not come at the expense of public safety and national security.

Our study begins with a presentation of the diffusion of AI technologies in Singapore, followed by an examination of awareness and perceptions of the technology. Although Singapore is widely recognised as Asia's leading smart city,[3] our study uncovers significant gaps in the public's awareness of and opinion on AI. Our results show a looming AI divide between certain demographics that requires urgent attention. There were also serious concerns among the public regarding the potential harm caused by AI.

While such concerns may reflect a cautious citizenry, our study results reveal that fear likely stems from the lack of knowledge of and heightened uncertainty about AI. This fact becomes increasingly alarming as Singapore pushes for rapid adoption of AI across all sectors as part of its Smart Nation 2.0 strategy.[4] However, despite the government's significant investments in promoting a digital economy and fostering responsible innovation,[5] concerns around privacy, security and ethical issues persist among the public. Our findings suggest that these trust deficits may constrain the full potential of AI and other technologies unless they are addressed through strengthened governance frameworks and proactive public engagement strategies.

---

[1] Funk, Cary, Alec Tyson, Brian Kennedy, and Courtney Johnson, "Scientists Are among the Most Trusted Groups in Society, Though Many Value Practical Experience over Expertise", Pew Research Center, 29 September 2020, https://www.pewresearch.org/science/2020/09/29/scientists-are-among-the-most-trusted-groups-in-society-though-many-value-practical-experience-over-expertise/.

[2] "Cognitive Warfare: Strengthening and Defending the Mind", *Allied Command Transformation*, 5 April 2023, https://www.act.nato.int/article/cognitive-warfare-strengthening-and-defending-the-mind/.

[3] "IMD Smart City Index 2024", International Institute for Management Development, 2024, https://issuu.com/docs/e7a60c053affbf9e98fcba93afe857af?fr=xKAE9_zU1NQ.

[4] Neyazi, T. A., Ng, S. W. T., Hobbs, M., and Yue, A., "Understanding User Interactions and Perceptions of AI Risk in Singapore", *Big Data & Society* 10, no. 2 (2023): 1–13, https://doi.org/10.1177/20539517231213823.

[5] "Our Smart Nation Vision", Smart Nation Singapore, Accessed 26 February 2025, https://www.smartnation.gov.sg/vision/.

Data and Demographics

This report is based on a nationally representative online survey of adult Singapore residents aged 21 and above. The survey sample was designed to closely mirror (where possible) the actual demographic profile of adults in Singapore in 2024.[6]

Guided by an extensive literature review, we drafted a questionnaire that was later pre-tested by social scientists. This questionnaire was uploaded on a hosting site (Qualtrics), which was later shared with a professional polling company that distributed the questionnaire to its panels of participants, who then received points from the polling company that can be exchanged for retail vouchers.

Following the completion of data collection in May 2024, we downloaded the data for cleaning and checking, yielding 1014 (out of 1200) valid responses. Weighted distribution based on ethnicity was employed on the survey data to account for the invalid responses and achieve a nationally representative sample of adult residents. The ethnic breakdown of respondents was: Chinese (73.6%), followed by Malay (16.3%), Indian (8.1%) and "Others" (2.1%).

In terms of gender, 532 participants (52.5%) were male and 482 participants (47.5%) were female. This sample distribution approximates the actual population distribution in Singapore based on government data.[7]

Of the 1,014 participants in this survey, 107 (10.6%) were from Generation Z (11–26 years old), whereas 365 (36.0%) were Millennials (27–42 years old), 412 (40.6%) were from Generation X (43–58 years old), and 130 (12.8%) were Boomers (59–77 years old).

As Singapore is an interreligious society, our survey attempted to cover most of the major religious groups in the country. Thus, 298 participants (29.4%) were Buddhists and 187 participants (18.4%) were followers of Islam. They were followed by the Christianity (non-Catholic) group, which consisted of 174 participants (17.2%). On the other hand, 171 participants (16.9%) identified as free thinkers, while 70 participants (6.9%) were of the Catholic faith, 56 were Taoist (5.5%), 50 were Hindus (4.9%), 4 were Sikhs (0.4%), and 4 participants (0.4%) specified "Others" for religion.

While most of our respondents were Singaporeans (88.4%), we also included permanent residents (9.2%) and foreign residents (2.5%). We also ensured that participants represented a range of educational levels, household incomes and current employment arrangements.

Finally, to ensure that the survey reflects a balanced public opinion with multiple stakeholder perspectives, we asked the respondents whether they had computer science or engineering educational backgrounds or work experience. Less than a

[6] "Population Trends 2024", Singapore Department of Statistics, September 2024, https://www.singstat.gov.sg/-/media/files/publications/population/population2024.ashx; "Overall Population", National Population and Talent Division, Strategy Group, PMO Singapore, https://www.population.gov.sg/our-population/population-trends/overall-population/.

[7] "Population Trends 2024", Singapore Department of Statistics, September 2024, https://www.singstat.gov.sg/-/media/files/publications/population/population2024.ashx.

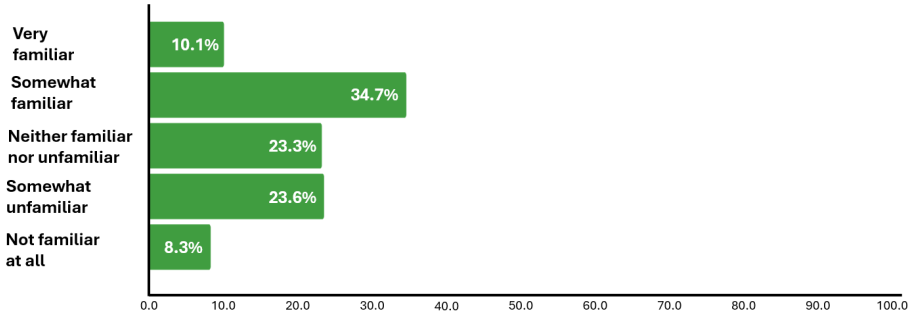
quarter had a relevant degree, while less than a third reported having any related experience.

AI Familiarity and Use

How the public perceives AI may depend on their familiarity with, and use of, the technology. So, how familiar are Singapore residents with AI, and how often do they use AI?

In the survey, nearly half of the respondents reported being somewhat (34.7%) or very (10.1%) familiar with AI (see Figure 1). We found that education level has the strongest correlation with AI familiarity. Those with higher educational attainment tend to report greater familiarity with AI concepts and applications. Additionally, younger people, higher-income respondents and males tend to report higher familiarity with AI. These findings not only highlight a looming AI divide, but also underscore the influence of education, income, age, and gender on AI familiarity, which can guide targeted outreach and educational efforts to improve AI literacy among various demographic groups in Singapore.

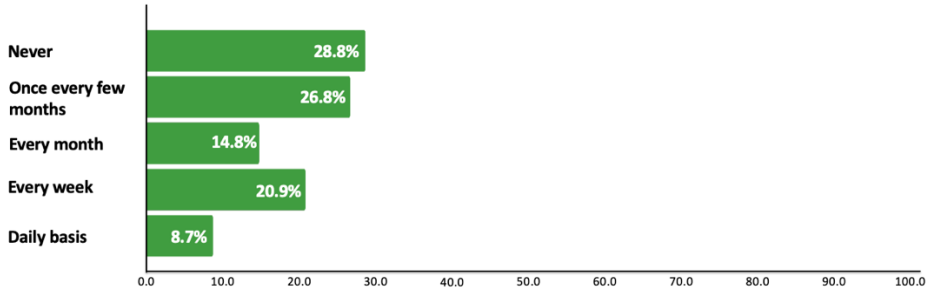
Figure 1: Familiarity with AI



Familiarity was the primary factor influencing AI use: the more familiar respondents were with AI, the more likely they were to use it. Education and income levels were also positively related to use, where higher education and household income corresponded to greater AI use. Conversely, age had an inverse relationship with AI usage – older respondents used AI less frequently, if at all.

When asked about their actual use of AI, 28.8% (292 respondents) said they had never used AI (see Figure 2). This finding can be interpreted in two ways. One possibility is that a significant number of Singapore residents have simply never interacted with AI. However, a more concerning interpretation is that, despite Singapore's status as a digital economy where AI is integrated into many aspects of daily life, many residents fail to recognise that they are, in fact, encountering AI. This lack of awareness is troubling as it leaves people more vulnerable to potential misuse of the technology by bad actors.

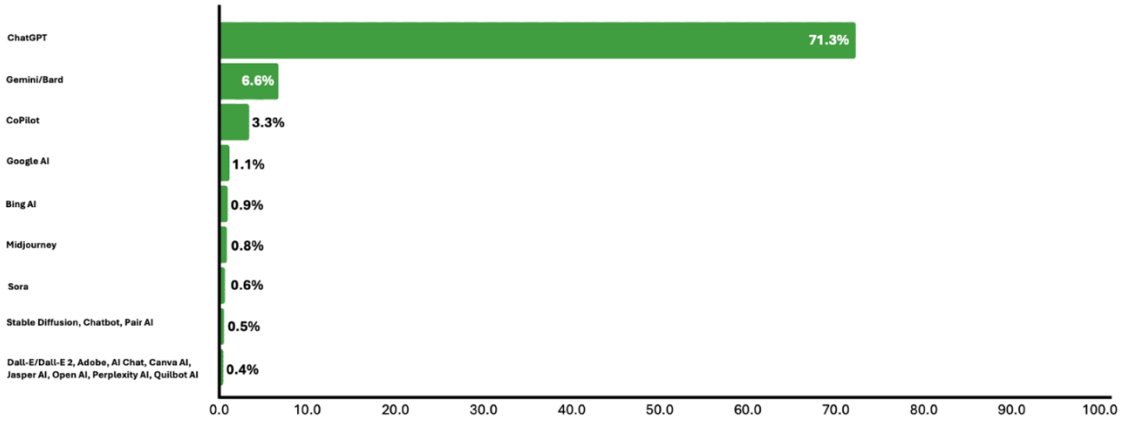
Figure 2: AI Use



ChatGPT Most Popular AI Tool; Educational Use Perceived as Most Common

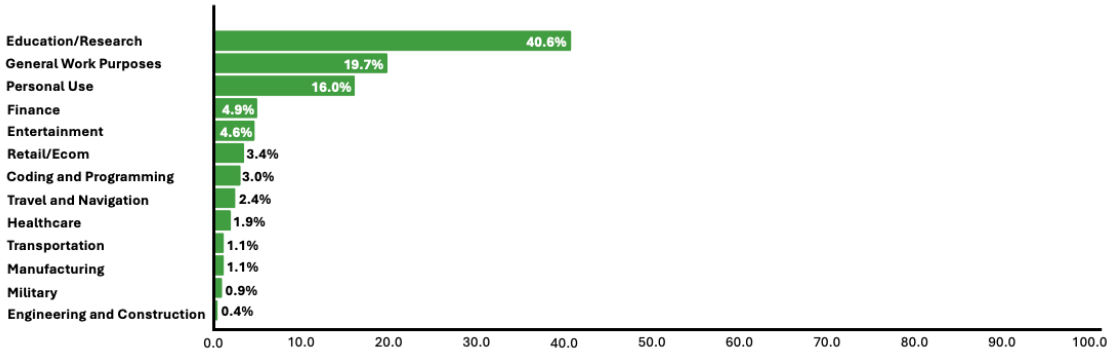
In terms of specific AI tools, ChatGPT was the most well-known, with a majority of respondents reporting prior use (71.3%; 601 respondents). The other AI tools have significantly lower utilisation (see Figure 3).

Figure 3: Usage of AI Tools



Although the majority of respondents had only used ChatGPT, many were also familiar with AI applications in various sectors. In the survey, we asked respondents: “List all applications of AI that you currently use (for example, education and research)” Most of them use AI in education and research (40.6%), and some for general work purposes (19.7%) and personal use (16%) (see Figure 4).

Figure 4: Use of AI across Different Sectors



For the most part, these findings reflect a society that largely views and utilises AI as a tool for general and personal assistance – a point that warrants further investigation, particularly for those respondents who reported using AI beyond common applications. Although notably fewer respondents viewed AI as applicable in specialised sectors such as transportation, manufacturing, healthcare and security or utilised AI in these areas, it would be useful to investigate how AI is being leveraged in these respects. These perceived uses of AI may provide valuable insights into emerging trends, which can have significant policy implications.

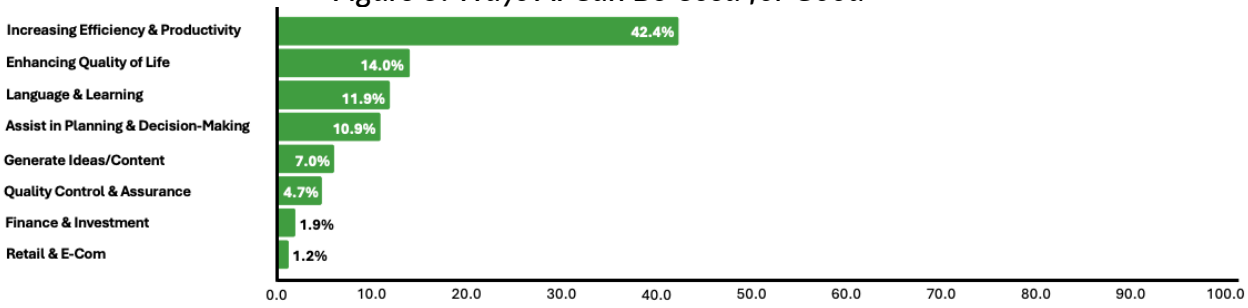
Views Regarding AI's Positive Applications and Potential Harms

The responses on AI's potential reveal both optimism and concern, highlighting the technology's promises alongside worries about cybersecurity threats, social impacts and misuse. These insights underscore the importance of developing policies that leverage AI's benefits while addressing its risks.

This section will explore these findings in more detail, shedding light on the respondents' views regarding AI's positive applications and potential harms, and the need for ethical oversight.

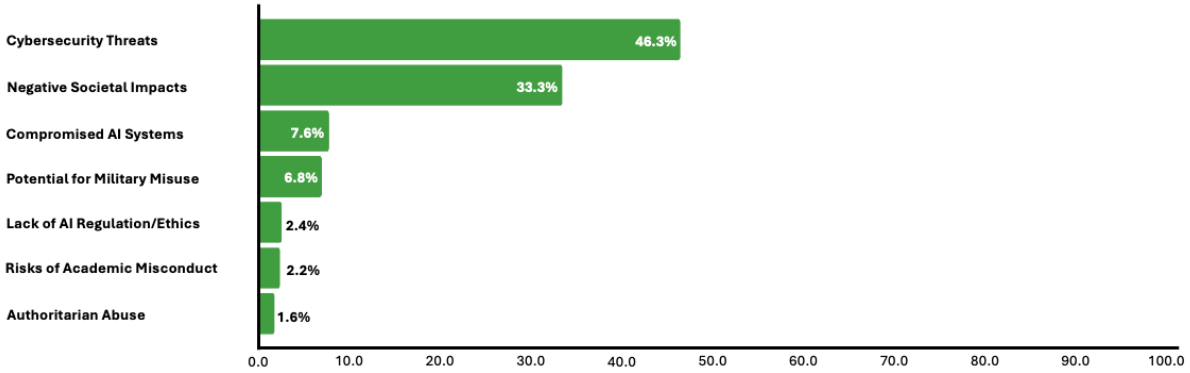
In the survey, the respondents were asked to list the different ways they think that AI will be used for good. This question generated 1,161 responses. Notably, 492 respondents (42.4%) highlighted AI's potential to increase efficiency and productivity. Other aspects of AI's potential uses for good include enhancing quality of life (14%), role in language and learning (11.9%), supporting planning and decision-making (10.9%), idea/content generation (7%), quality control and assurance (4.7%), finance/investment (1.9%), and retail/e-commerce (1.2%) (see Figure 5).

Figure 5: Ways AI Can Be Used for Good



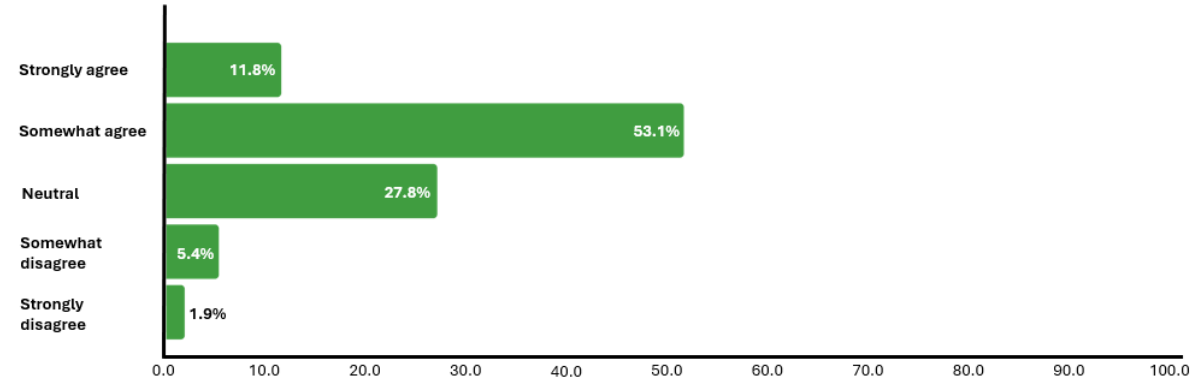
The survey also asked respondents to list the different ways they think that AI will be used to cause harm. This question elicited 1,016 responses. Of these, 470 responses (46.3%) focused on cybersecurity threats such as scams and cybercrime. Meanwhile, 33.3% highlighted negative social impacts like overreliance, job loss, and misinformation. Additionally, concerns about compromised AI systems (7.6%) and their potential for military use (6.8%) were raised. A few others pointed to issues like insufficient AI regulation/ethics (2.4%), academic misconduct (2.2%), and authoritarian abuse (1.6%) (see Figure 6).

Figure 6: Ways AI Can Be Used For Harm



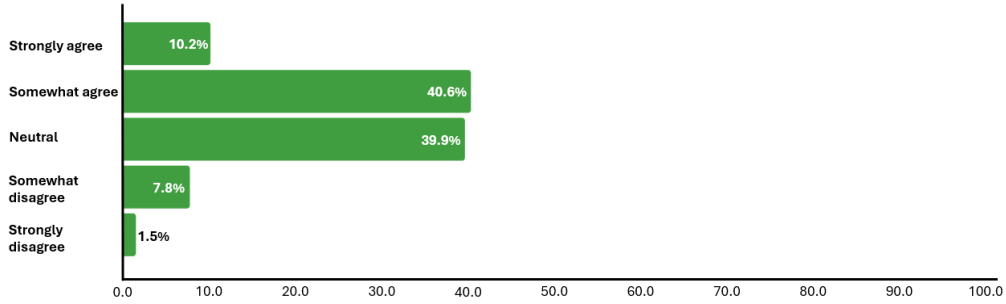
When asked to what extent they agree that AI will be used for good, the majority responded positively, with 53.1% indicating that they "somewhat agree" and 11.8% "strongly agree" (see Figure 7).

Figure 7: The Extent to Which Respondents Agree That AI Will Be Used To Cause Good



However, when asked to what extent they agree that AI will be used to cause harm, the majority also agreed, with 40.6% selecting "somewhat agree" and 10.2% selecting "strongly agree" (see Figure 8).

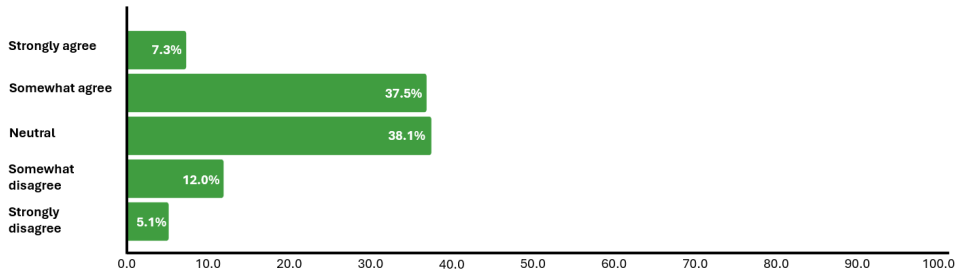
Figure 8: The Extent to Which Respondents Agree That AI Will Be Used To Cause Harm



Respondents who used AI more frequently, are better educated, and have higher incomes were more likely to recognise AI's benefits. However, the most significant factor in acknowledging AI's harmful potential is one's education level; individuals with advanced degrees are more cognisant of the harmful impacts of AI.

Regarding the extent to which AI can be ethically trusted, most respondents remained "neutral" (38.1%) or indicated they "somewhat agree" that the technology can be trusted (37.5%) (see Figure 9). The frequent use of AI influences the level of trust people have in AI's ethical functioning. As the frequency of AI use increases, so does the trust people have in its ethical usage. Similarly, those who are more familiar with AI are more likely to agree that it can be trusted to operate ethically.

Figure 9: The Extent to Which Respondents Agree That AI Can Be Ethically Trusted



Discussion

The findings from this study reveal a nuanced and evolving landscape of AI familiarity, usage and perception among Singapore residents. Overall, while AI technologies are becoming more prominent, significant gaps remain in how different demographic groups interact with, understand and trust those technologies. These insights have critical implications for shaping education, policies and regulations concerning AI.

One of the striking findings is the pivotal role of education in shaping AI familiarity and use. Individuals with higher education levels were significantly more likely to be familiar with AI, use it regularly and recognise both its benefits and risks. This finding underscores the central role that education plays in fostering digital literacy and points to the importance of integrating AI-related content into both formal curricula and lifelong learning initiatives. In addition to education, income levels and age also emerged as key predictors of AI engagement, with younger and higher-income individuals reporting greater familiarity with, and more frequent use of, the technology. Notably, gender differences were also evident, with male respondents generally reporting higher levels of AI familiarity.

Overall, these demographic disparities suggest the emergence of an AI divide, where access to and benefits from AI technologies are unequally distributed. If left unaddressed, this divide could exacerbate existing inequalities in digital participation, employment opportunities and access to information. These demographic disparities warrant further investigation from future studies.

The relatively high percentage of respondents who reported never having used AI (28.8%) raises concerns about the invisibility of AI in everyday life. Many individuals may be unknowingly interacting with AI-powered systems, highlighting a significant gap in public awareness. Studies show that low awareness results in passive responses

to online falsehoods,[8] allowing them to spread unchecked. Likewise, individuals who consider themselves less vulnerable to such content were less likely to feel the need to actively seek verification of information owing to their self-confidence.[9] Thus, lack of awareness may leave users vulnerable to manipulation or prone to misusing AI, reinforcing the critical need for greater transparency in the deployment of AI and for enhanced public education on how these technologies function within everyday digital environments.

When respondents were asked about the sectors where AI is most commonly applied, education and research topped the list. Likewise, a significant number of users reported using AI for general work purposes and personal assistance. These findings indicate that public perceptions of AI remain primarily grounded in practical, everyday applications, and less so in its potential role in more specialised or industrial domains. This finding calls for further investigation into sector-specific adoption, especially in areas like transportation, manufacturing and security, where AI integration may still be at less visible stages.

This study also uncovered a complex public sentiment regarding AI's future impact. Although respondents agreed that AI could be used for positive purposes, particularly by enhancing productivity and efficiency, an almost equal number expressed apprehensions about potential risks. This finding demonstrates the nuanced view of AI where the public recognises its potential benefits while simultaneously fearing its risks. It suggests that AI engagement and adoption may be driven by both optimism and caution.

Finally, public trust in AI's ethical functioning remains tentative. A considerable proportion of respondents remained neutral or only somewhat agreed that AI could be ethically trusted. Notably, trust was positively associated with familiarity and frequency of use, suggesting that increased exposure may help mitigate scepticism. Nevertheless, public confidence in AI will likely remain limited without the establishment of robust governance frameworks grounded in accountability, ethical design principles and stakeholder engagement.

[8] Tandoc, E. C., Lim, D., and Ling, R, "Diffusion of Disinformation: How Social Media Users Respond to Fake News and Why", *Journalism* 21, no. 3 (2019): 381–398, https://doi.org/10.1177/1464884919868325.
[9] Neyazi, T. A., Ng, S. W. T., Hobbs, M., and Yue, A., "Understanding User Interactions".

Policy Recommendations

This study highlights the complex and uneven landscape of AI familiarity, use and perceptions among Singapore residents. Study findings underscore the urgent need for a comprehensive, multi-pronged policy response to ensure inclusive and responsible AI development and use. As Singapore advances its National AI Strategy 2.0 (NAIS 2.0), which aims to position the country as a global hub for AI innovation, it must also ensure that public trust is strengthened and that the benefits of AI are equitably shared across populations. To do so, ethical, transparent and human-centric approaches should be employed for AI deployment.

First, education must be the foundation of Singapore's approach to AI adoption. The study found that individuals with higher education levels reported greater familiarity with and use of AI, highlighting the pivotal role of education in driving digital inclusion. To bridge the digital gap, AI literacy should be systematically embedded across the national curriculum, from primary to tertiary levels. Aside from being a part of computing or STEM education, AI-focused learning should also be integrated into the humanities, social sciences and vocational tracks to encourage interdisciplinary understanding. Concurrently, adult learning initiatives such as SkillsFuture can be further expanded to include more modular, accessible and industry-aligned AI courses targeting older adults, lower-income groups and mid-career workers. While the survey mainly involved Singaporeans, training opportunities for foreign workers, typically not covered by the SkillsFuture programme, could also help support the upskilling of a significant portion of Singapore's workforce. Doing so may help close the emerging AI divide, mitigate digital exclusion and ensure broader participation in Singapore's digital economy.

Second, inadequate AI awareness increases risks of manipulation, discrimination and security threats as individuals may fail to recognise or fully understand AI systems and the content they generate. As Singapore undergoes rapid digital uptake without corresponding AI literacy gains,[10] the capacity to effectively address AI-driven misinformation may be limited, potentially contributing to heightened sensitivities within the nation's diverse and multicultural society. Thus, effective interventions must go beyond general digital literacy to address AI's complex "black box" nature and its varying impacts on different demographic groups. Targeted, regularly updated AI awareness programmes, as well as research that tracks evolving vulnerabilities, are crucial in safeguarding against these risks.

Third, the fact that ChatGPT was reported to be the most highly used tool suggests a lack of technical confidence and limited public understanding of where AI is integrated in everyday digital platforms. Notably, nearly 29% of respondents reported never using AI despite likely engaging with it indirectly through algorithms embedded in social media, e-commerce, and other everyday digital platforms. This invisibility of AI underscores the need for greater public transparency. Government agencies and the private sector alike should implement clearer labelling of AI systems and communicate their functions and limitations to users in plain language. Public education campaigns

[10] "CSA's 2024: Cybersecurity Public Awareness Survey Shows an Improvement in the Adoption of Cyber Hygiene Practices", Cyber Security Agency of Singapore, 2 July 2025, https://www.csa.gov.sg/news-events/press-releases/csa-s-2024-cybersecurity-public-awareness-survey-shows-an-improvement-in-the-adoption-of-cyber-hygiene-practices.

can serve a key role in fostering a more informed and discerning public that understands both the potential benefits and risks associated with AI in daily life.

Fourth, addressing public scepticism about the ethical use of AI requires the strengthening of Singapore's AI governance frameworks, as well as better public communication, to bolster awareness of AI research, development and use by the different sectors in Singapore. The study found that trust in AI remains tentative and is closely tied to familiarity and use. While Singapore's launch of AI Verify in 2023 and the 2025 establishment of the Global AI Assurance Pilot are positive steps, further regulatory safeguards are needed to ensure accountability, fairness and safety. These could include enforceable ethical guidelines for AI development, requirements for algorithmic transparency, data protection mandates and mechanisms for resolution when harm occurs. Stakeholder engagement, including industry, academia and civil society, must also be formally incorporated into governance processes to ensure that diverse perspectives inform the development of AI frameworks.

Finally, the public currently associates AI primarily with applications in education, research and personal productivity, while its role in sectors such as security, manufacturing and transport remains less understood or visible. To enhance public awareness, business and trade associations must improve their public communication of AI use. Think tanks and academic institutions could support this effort by publishing more accessible information on AI's pervasiveness in society.

In conclusion, Singapore's leadership in AI must be accompanied by a strong commitment to inclusivity, transparency and ethical governance. By embracing these principles, the country can get closer to ensuring that AI as a technology evolves into a safe, responsible and sustainable tool capable of empowering all segments of society.

About the Authors

Dr Karryl Kim Sagun Trajano is a Research Fellow for Future Issues and Technology (FIT) at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore.

Seth Seet Kai is a Research Associate with the Centre for Information Integrity and the Internet (IN-cube) at the Wee Kim Wee School of Communication and Information (WKWSCI), NTU.

Ysa Marie Cayabyab is an Associate Research Fellow for FIT, RSIS, NTU.

Dr Edson Tandoc, Jr. is the founding Director of IN-cube at WKWSCI, and President's Chair Professor of Communication Studies at NTU.

About Future Issues and Technology (FIT)

The Future Issues and Technology (FIT) research cluster supports the development of RSIS' research agenda on emerging issues where science and technology intersect with national security. FIT works collaboratively with a wide range of RSIS stakeholders to explore and incubate topics that could become new research areas and builds up RSIS' networks with science and technology experts and researchers working on ideas yet to enter the mainstream. FIT's current focus areas include: (1) AI & Data, (2) Technology & Geopolitics, (3) Science & Technology's Evolving Relationship with National Security, (4) Space, (5) Biotechnology, and (6) Quantum technologies.

About the S. Rajaratnam School of International Studies

The S. Rajaratnam School of International Studies (RSIS) is a global graduate school and think tank focusing on strategic studies and security affairs. Its five Research Centres and three Research Programmes, led by the Office of the Executive Deputy Chairman, and assisted by the Dean on the academic side, drive the School's research, education and networking activities.

The graduate school offers Master of Science Programmes in Strategic Studies, International Relations, International Political Economy and Asian Studies. As a school, RSIS fosters a nurturing environment to develop students into first-class scholars and practitioners.

As a think tank, RSIS conducts policy-relevant and forward-looking research in both national and international security, science and technology, society and economic and environmental sustainability. RSIS also produces academic research on security and international affairs. It publishes scholarly research in top-tier academic journals and leading university presses, and distributes policy research in a timely manner to a wide range of readers.

Please share this publication with your friends. They can subscribe to RSIS publications by scanning the QR Code below.