ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 3| March2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

A STUDY ON AWARENESS AND ADOPTION OF GREEN AI PRACTICES AMONG YOUNG ADULTS (18-35)

Dr. J. Lilly[1], S. Dharshan[2]
[1]*Professor, Department of Commerce (IT), Dr. N.G.P. Arts and Science College, Coimbatore*
[2]*III B. Com IT, Department of Commerce (IT), Dr. N.G.P. Arts and Science College, Coimbatore*

ABSTRACT

Artificial Intelligence (AI) plays an important role in modern society, supporting activities such as education, communication, and business operations. However, the rapid growth of AI has raised concerns about high energy consumption and environmental impact. Green Artificial Intelligence (Green AI) focuses on developing and using AI systems in an energy-efficient and environmentally responsible way.

This study aims to examine the awareness, attitude, and adoption of Green AI practices among young adults aged 18–35. Primary data were collected from 120 respondents using a structured questionnaire with convenience sampling. Percentage analysis, ranking analysis, and chi-square tests were used for data analysis.

The findings show that respondents generally have a positive attitude toward sustainable AI practices, but the actual adoption of Green AI is moderate. Lack of awareness, limited training, and high costs are identified as major barriers. The study suggests that increasing awareness and promoting energy-efficient technologies can improve the adoption of Green AI among young adults.

KEYWORDS: *Green Artificial Intelligence, Sustainability, Energy-Efficient AI, Environmental Impact, Technology Adoption.*

INTRODUCTION

Artificial Intelligence (AI) has become an important part of modern life and is widely used in areas such as education, business, healthcare, and communication. AI helps organizations and individuals perform tasks more efficiently by analysing large amounts of data and providing intelligent solutions. However, the rapid growth of AI technologies has also increased concerns about energy consumption and environmental impact.

Training and operating AI systems require large computational resources, which consume significant electricity and contribute to carbon emissions. To address this issue, the concept of **Green Artificial Intelligence (Green AI)** has emerged. Green AI focuses on developing and using AI technologies in a way that reduces energy consumption and promotes environmental sustainability.

Young adults are among the most active users of digital technologies and play an important role in the adoption of new technological practices. Their awareness and attitude toward sustainable technologies can influence the future use of AI systems. Therefore, understanding their perception and adoption of Green AI practices is important.

This study aims to examine the **awareness, attitude, and adoption of Green Artificial Intelligence practices among young adults** and to understand the factors that influence the use of environmentally responsible AI technologies.

STATEMENT OF THE PROBLEM

Artificial Intelligence (AI) has rapidly transformed various sectors such as education, business, healthcare, and communication by improving efficiency and supporting better decision-making. However, the increasing use of advanced AI models and large data centers requires significant computational resources and electricity, which raises concerns about energy consumption and carbon emissions. These environmental concerns have led to the emergence of **Green Artificial Intelligence (Green AI)**, which focuses on developing and using AI technologies in an energy-efficient and environmentally sustainable manner.

Young adults are among the most active users of digital technologies and play an important role in the adoption of new technological practices. Despite the growing importance of sustainable technology, awareness and understanding of Green AI among young adults remain limited. Therefore, this study aims to examine the awareness, attitude, and adoption of Green AI practices among young adults and to identify the factors influencing their adoption of environmentally responsible AI technologies.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 3| March2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

REVIEW OF LITERATURE

YEAR	TOPIC OF THE ARTICLE	AUTHOR(S)	METHODOLOGY	FINDINGS
2023	Factors Influencing Sustainable Technology Adoption Among Young Adults	Kumar and Verma	Quantitative research using structured questionnaires and statistical analysis	Found that environmental awareness, technological knowledge, and social influence significantly influence sustainable technology adoption among young adults.
2021	Artificial Intelligence and Sustainable Development	Dwivedi et al.	Theoretical and interdisciplinary literature review across industries	Concluded that responsible and ethical AI adoption enhances sustainable development and highlighted the role of awareness in AI usage.
2020	The Role of Artificial Intelligence in Achieving the Sustainable Development Goals	Vinuesa et al.	Systematic literature review and policy analysis	Revealed that AI can contribute positively to sustainability goals if used responsibly, while irresponsible use may negatively affect environmental objectives.
2019	Energy and Policy Considerations for Deep Learning in Natural Language Processing	Strubell, Ganesh, and McCallum	Empirical analysis measuring energy consumption and carbon emissions of deep learning models	Demonstrated that large AI models consume high energy and produce significant carbon emissions, emphasizing the need for sustainable AI practices.
2019	Green AI	Schwartz et al.	Conceptual and analytical review focusing on performance versus energy efficiency in AI systems	Introduced the concept of Green AI and stressed the importance of energy-efficient AI development to reduce environmental impact.

OBJECTIVES OF THE STUDY

1. To evaluate the level of awareness of Green AI practices among young adults (18–35 years).
2. To examine the perception and attitude of young adults toward the environmental impact of Artificial Intelligence.
3. To assess the extent of adoption of Green AI practices in daily life, education, and workplace settings.
4. To identify the key challenges and barriers faced by young adults in adopting Green AI practices.

RESEARCH METHODOLOGY

This study adopts a descriptive research design to examine the awareness, perception, adoption, and challenges of Green Artificial Intelligence among young adults. The study was conducted in Coimbatore with a sample size of 120 respondents, selected using the convenience sampling method. Primary data were collected through a structured questionnaire using Google Forms, while secondary data were obtained from journals, research articles, and reports related to Artificial Intelligence and sustainability. The collected data were coded, tabulated, and analysed using SPSS and Microsoft Excel. Statistical tools such as percentage analysis, and chi-square test were applied to interpret the data effectively.

SCOPE OF THE STUDY

This study focuses on the awareness, attitude, and adoption of Green Artificial Intelligence (Green AI) practices among young adults aged 18–35. It examines how young adults understand and perceive environmentally sustainable AI technologies. The study also analyses the extent to which Green AI practices are adopted in daily digital activities, education, and workplaces. In addition, it identifies the factors influencing the adoption of Green AI practices. The research is based on primary data collected from 120 respondents using a structured questionnaire. The findings help to understand the current level of awareness and promote sustainable AI practices.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 3| March2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

DEMOGRAPHIC PROFILE OF THE RESPONDENTS

S.NO	FACTORS	CATEGORY	NO.OF RESPONDENTS	%
a)	AGE	18-21	75	62.5
		22-25	24	20
		26-30	12	10
		31-35	9	7.5
		Total	**120**	**100**
b)	GENDER	Male	78	65
		Female	42	35
		Total	**120**	**100**
c)	EDUCATIONAL QUALIFICATION	UNDERGRADUATE-UG	75	62.5
		POSTGRADUATE-PG	24	20
		PROFESSIONAL COURSE	20	16.7
		OTHERS	1	0.8
		Total	**120**	**100**
d)	OCCUPATION	STUDENT	71	59.2
		PRIVATE EMPLOYEE	22	18.3
		PUBLIC EMPLOYEE	12	10
		BUSINESS	11	9.2
		UNEMPLOYED	4	3.3
		Total	**120**	**100**

INTERPRETATION

- The majority of respondents **(62.5%) are aged 18–21**, followed by 22–25 (20%),26–30 (10%), and 31–35 (7.5%), showing that young adults dominate the sample.
- Most respondents are **male (65%)**, while **35% are female**.
- In terms of education, **62.5% are undergraduates**, followed by postgraduates (20%), professional course students (16.7%), and others (0.8%).
- Regarding occupation, the majority are **students (59.2%)**, followed by private employees (18.3%), public employees (10%), business (9.2%), and unemployed (3.3%).

AWARENESS OF GREEN AI

S.NO	Statement	Highly Aware	Aware	Neutral	Not Aware	Not at all Aware	TOTAL
a)	Awareness of Green AI	52 (43.3%)	42 (35%)	15 (12.5%)	9 (7.5%)	2 (1.7%)	120 (100%)
b)	AI uses a lot of energy	28 (23.3%)	61 (50.8%)	21 (17.5%)	9 (7.5%)	1 (0.9%)	120 (100%)
c)	AI causes carbon emissions	34 (28.3%)	48 (40%)	26 (21.7%)	8 (6.7%)	4 (3.3%)	120 (100%)
d)	Energy-saving AI methods	24 (20%)	56 (46.7%)	25 (20.8%)	15 (12.5%)	–	120 (100%)
e)	Eco-friendly technology practices	34 (28.3%)	44 (36.7%)	27 (22.5%)	10 (8.3%)	5 (4.2%)	120 (100%)

INTERPRETATION

The table shows that 43.3% of respondents are highly aware of Green AI and 35% are aware, indicating a good level of awareness among respondents.

- About 50.8% of respondents are aware that AI uses a large amount of energy, while 23.3% are highly aware of this issue.
- Regarding AI causing carbon emissions, 40% are aware and 28.3% are highly aware, showing moderate awareness of AI's environmental impact.
- For energy-saving AI methods, most respondents (46.7%) are aware, while 20% are highly aware.
- In terms of eco-friendly technology practices, 36.7% are aware and 28.3% are highly aware.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 3| March2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

ADOPTION OF GREEN AI PRACTICES

S.NO	Statement	Yes	No	TOTAL
a)	Green AI used in daily digital activities	105 (87.5%)	15 (12.5%)	120 (100%)
b)	Used in education	70 (58.3%)	50 (41.7%)	120 (100%)
c)	Used at workplace	75 (62.5%)	45 (37.5%)	120 (100%)
d)	Prefer eco-friendly AI tools	76 (63.3%)	44 (36.7%)	120 (100%)
e)	Plan to use Green AI in the future	92 (76.7%)	28 (23.3%)	120 (100%)

INTERPRETATION

- A large majority of respondents (87.5%) stated that **Green AI is used in their daily digital activities**, while only 12.5% reported not using it.
- More than half of the respondents (58.3%) indicated that **Green AI is used in education**, whereas 41.7% reported that it is not commonly used in educational activities.
- About 62.5% of respondents mentioned that **Green AI is used at the workplace**, while 37.5% stated that it is not used in their workplace.
- A majority of respondents (63.3%) said they **prefer eco-friendly AI tools**, indicating a positive attitude toward sustainable technologies.
- Most respondents (76.7%) **plan to use Green AI in the future**, showing strong interest in adopting environmentally friendly AI practices

CHI-SQUARE ANALYSIS

CROSS TABULATION – GENDER AND ADOPTION OF GREEN AI PRACTICES [PLAN TO USE GREEN AI IN THE FUTURE?]

GROUP OF RESPONDENTS			3. Adoption of Green AI Practices [Plan to use Green AI in the future?]		Total
			Yes	No	
GENDER	MALE	No.	57	19	**76**
		No.	57	19	**76**
		%	75.00%	25.00%	**100.00%**
	FEMALE	No.	33	11	**44**
		No.	33	11	**44**
		%	75.00%	25.00%	**100.00%**
Total		No.	90	30	**120**
		No.	90	30	**120**
		%	75.00%	25.00%	**100.00%**

INTERPRETATION

- The table shows that 75% of both male and female respondents plan to use Green AI in the future, while 25% do not plan to use it.
- This indicates that both genders show a similar and positive intention toward adopting Green AI practices in the future.

CHI-SQUARE - GENDER AND ADOPTION OF GREEN AI PRACTICES [PLAN TO USE GREEN AI IN THE FUTURE?]

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.000[a]	1	1		
Continuity Correction[b]	0	1	1		
Likelihood Ratio	0	1	1		
Fisher's Exact Test				1	0.59
Linear-by-Linear Association	0	1	1		
N of Valid Cases	120				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.00.					
b. Computed only for a 2x2 table					

INTERPRETATION

- The **Chi-square test result shows a significance value of 1.000 (p > 0.05)**, indicating that there is **no significant relationship between gender and the plan to use Green AI in the future**.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 3| March2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

- Therefore, the **null hypothesis is accepted**, meaning that gender does not significantly influence respondents' intention to adopt Green AI practices.

SUGGESTIONS

1. Educational institutions should conduct awareness programs, workshops, and seminars to increase knowledge about Green Artificial Intelligence and its importance for environmental sustainability.
2. Colleges and universities should include topics related to sustainable computing and Green AI in their curriculum to help students understand environmentally responsible technology practices.
3. Technology companies and developers should focus on creating energy-efficient AI systems that consume less computational power and electricity.
4. Training programs and skill development initiatives should be provided to help individuals understand how to apply Green AI practices in education, daily activities, and workplaces.
5. Young adults should be encouraged to use digital technologies responsibly by adopting energy-efficient tools and reducing unnecessary use of computational resources.

LIMITATIONS OF THE STUDY

- The study is limited to 120 respondents.
- Convenience sampling was used, which may not fully represent the entire population.
- The research focuses only on young adults aged 18–35.
- The study is based on self-reported responses from respondents.

CONCLUSION

Artificial Intelligence plays an important role in modern society, but its increasing use also raises concerns about energy consumption and environmental impact. Green Artificial Intelligence promotes the development and use of energy-efficient and environmentally sustainable AI systems. This study found that young adults generally have a positive attitude toward Green AI, but the level of adoption is still moderate due to limited awareness and training. Therefore, increasing awareness, providing education, and encouraging sustainable technology practices can help promote the wider adoption of Green AI among young adults and support environmental sustainability.

REFERENCES

1. ***Schwartz, R., Dodge, J., Smith, N. A., & Etzioni, O. (2020).*** *Green AI. Communications of the ACM, 63(12), 54–63.*
2. ***Strubell, E., Ganesh, A., & McCallum, A. (2019).*** *Energy and policy considerations for deep learning in NLP. Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics, 3645–3650.*
3. ***Rolnick, D., Donti, P., Kaack, L., et al. (2019).*** *Tackling climate change with machine learning. arXiv preprint arXiv:1906.05433.*
4. ***Vinuesa, R., Azizpour, H., Leite, I., et al. (2020).*** *The role of artificial intelligence in achieving the Sustainable Development Goals. Nature Communications, 11(233).*
5. ***Kaack, L., Donti, P., Strubell, E., et al. (2022).*** *Aligning artificial intelligence with climate change mitigation. Nature Climate Change, 12, 518–527.*