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Technology Ethics and Social Responsibility: A Human-Centred Study of How Technology Affects People, Work and Society

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Abstract : **- Technology is part of almost everything we do today, from paying for tea with a QR code to attending classes online. It has made life easier, but it has also brought problems that we do not always stop to think about: personal data collected without clear permission, workers tracked through the day, people without a smartphone or a good connection left out, false information spreading fast, and heaps of discarded electronics. This paper looks at technology ethics and social responsibility from the point of view of ordinary people, namely consumers, employees, students and communities, instead of focusing only on artificial intelligence. It tries to understand how organisations and individuals can keep innovating without harming the people who depend on their products. Primary data will be collected through a structured questionnaire from technology users and working professionals in different sectors, and this will be supported by recent data from journals, books, government documents and reports of international bodies. The study hopes to show why ethical practice matters and to suggest simple, workable steps that organisations can take to make their use of technology more responsible, accountable and sustainable.**

Keywords: Technology Ethics, Social Responsibility, Data Privacy, Digital Inclusion, Workplace Ethics, Corporate Accountability, Responsible Innovation.

1. INTRODUCTION

Think about how an ordinary day begins. The phone alarm goes off, and within minutes the same phone is showing us news, offers and messages that it has picked for us. We pay for tea with a QR code, attend lectures online, apply for jobs through portals and let apps know where we are, usually without a second thought. Technology has made all of this faster and easier. But it has also changed how we deal with one another, how companies treat their customers and staff, and how much of our private life is really private.

This raises a basic question: when technology causes harm, who is responsible? A company that collects more personal data than it needs, a delivery app that changes its payment rules without warning, or a college that assumes every student has a smartphone and a steady internet connection is making a choice, and these choices land on real people. Technology ethics asks what technology should do, and not just what it can do. Social responsibility goes one step further and asks organisations to think about the wellbeing of people and communities, and not only about profit.

Most discussions on this subject today revolve around artificial intelligence. AI does matter, but ethical problems in technology are older and wider than AI. They also involve how data is collected, how workers are watched, who can use digital services at all, and what happens to old devices once we stop using them. For this reason, this paper keeps people at the centre. AI appears here as one issue among many, not as the whole story.

2. OBJECTIVES AND SIGNIFICANCE OF THE STUDY

- To understand what technology ethics and social responsibility mean in everyday life and in business.
- To identify the main ethical concerns that technology creates for users, employees and society.
- To look at the part played by organisations, governments and individuals in encouraging responsible use of technology.

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- To suggest practical steps that can help organisations balance innovation with social accountability.

The topic is worth studying because the technology we use is changing faster than the habits and rules around it. India is a good example. Millions of people here use digital payments, delivery apps and online learning every day, while many others still struggle with basic access. A study that looks at both sides can help companies, colleges and policymakers understand where the real gaps are, and it can help students like us become more thoughtful users of technology.

3. REVIEW OF LITERATURE

3.1 Foundations of technology ethics

Moor (1985) described computer ethics as the study of the nature and social impact of computers and of the rules we need for using them ethically. One of his best-known points is that new technology often creates "policy vacuums", moments when the technology already exists but society has not yet decided how it should be used. Floridi (2013) argued that information itself deserves ethical attention, because the way data about people is collected and used shapes who they are and how free they are. Jonas (1984) had made a related point earlier: the power of modern technology means we must think about long-term consequences, including for people who are not yet born.

3.2 Corporate social responsibility

Carroll (1991) said that the responsibility of a business has four layers: economic, legal, ethical and philanthropic. The ethical layer means doing what is fair and right even when no law forces a company to do so. This is especially relevant to technology firms, because the law usually moves more slowly than innovation. Freeman (1984) added the stakeholder idea, which holds that a company owes something not just to its shareholders but to everyone its decisions affect, including customers, employees, suppliers and local communities.

3.3 Data, surveillance and fairness

Zuboff (2019) used the term surveillance capitalism for a system in which ordinary human behaviour is turned into data and sold as predictions, often without people really knowing. Noble (2018) and O'Neil (2016) showed that automated systems can repeat existing social biases, and sometimes make them worse, in matters such as what information people see, whether they get credit and how they are judged. What these authors share is the view that unfair outcomes are not just technical errors. They come from human decisions about what to measure, what to ignore and whom to protect.

3.4 Responsible innovation

Stilgoe, Owen and Macnaghten (2013) suggested that responsible innovation rests on four habits: thinking ahead about what might go wrong, questioning one's own assumptions, involving a wide range of people in decisions, and being ready to change course. Put simply, it moves the question from "can we build this?" to "should we, and who gets a say?"

3.5 The digital divide

Van Dijk (2020) showed that the digital divide has several layers. The first is access to devices and connections, the second is the skills needed to use them well, and the third is the real benefit people get from being online. His argument is useful for this paper because it shows that giving someone a phone does not automatically make them included.

4. KEY ETHICAL ISSUES AFFECTING PEOPLE

4.1 Data privacy and consent

Almost all of us have clicked "I agree" on a long set of terms without reading it, because the only other choice is to not use the service. Consent given like this is a formality, not a real choice. Laws such as the European Union's General Data Protection Regulation (2016) and India's Digital Personal Data Protection Act (2023) try to give people more control over their data. In India, the Rules that put the Act into practice were notified in November 2025 and are being phased in, with most duties for organisations due by May 2027 (Ministry of Electronics and Information Technology, 2025). They include requirements on clear notices, security safeguards, reporting of data breaches and the handling of children's data. Still, rules alone are not enough. Organisations also need to decide for themselves to collect only what they need and to look after it properly.

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4.2 Technology at work

Remote monitoring tools, productivity trackers and gig platforms have changed the way people work. They can make work more efficient, but they also bring up questions of trust, stress and fairness. Delivery and ride-hailing workers often deal with incentives that keep changing, ratings they cannot easily challenge and limited job security. NITI Aayog (2022) estimated that about 7.7 million people were working in India's gig economy in 2020-21 and projected that the number could reach 23.5 million by 2029-30. The same report recommended extending social security to these workers and their families. Office employees face a different version of the problem, because they can feel that they are being watched all day. Good practice here is not complicated: organisations should be open about what they monitor, why they do it and how the information is used.

4.3 The digital divide and inclusion

Not everyone has the same access to technology. The International Telecommunication Union (2025) estimated that around 6 billion people were using the internet in 2025, but about 2.2 billion were still offline. Internet use was 85 per cent in urban areas compared with 58 per cent in rural areas, and 94 per cent in high-income countries compared with only 23 per cent in low-income countries. These numbers are global, but anyone in India can see the same pattern in the difference between a city student with fibre broadband and a village student sharing one phone with the family.

As education, banking and government services move to digital platforms, people such as older adults, rural residents, low-income families and persons with disabilities can easily be left behind. This is why digital inclusion should be seen as a social responsibility and not as an optional extra. Making devices and data affordable, teaching basic digital skills and keeping offline options available are practical ways to start.

4.4 Misinformation, attention and mental wellbeing

Social media and messaging apps are designed to hold our attention, and content that stirs strong emotions usually does that best. As a result, false information can travel quickly, and constant scrolling can add to anxiety, comparison and distraction, especially among young people. The people who design and own these platforms have a responsibility to think about the human cost of features meant to keep us on the screen longer.

4.5 E-waste and the environment

The environmental side of technology rarely gets the attention it deserves. The world produced about 53.6 million tonnes of electronic waste in 2019 (Forti et al., 2020), and by 2022 the figure had risen to about 62 million tonnes. Only 22.3 per cent of that was documented as properly collected and recycled, and generation is expected to reach 82 million tonnes by 2030 (Baldé et al., 2024). The same report warned that the share of e-waste that gets recycled may fall to around 20 per cent by 2030 because recycling is not keeping pace with the growth in waste. Short product lives, devices that are hard to repair and weak recycling systems leave a long-term burden on communities and ecosystems, often those that did the least to cause the problem.

4.6 Automation and the future of work

Automation, whether or not it uses artificial intelligence, changes which skills are valued and which jobs survive. The ethical response is to prepare people through training and a fair transition, instead of treating displaced workers as an acceptable price of progress.

4.7 Children and students online

Students are among the heaviest users of technology, and they are also among the most exposed. Online classes, learning apps and social media collect a lot of information about young people, and many of them do not fully understand where it goes. Children also face risks such as cyberbullying, harmful content and too much screen time. Schools, colleges and app makers share the responsibility to design age-appropriate services and to teach young people how to protect themselves online.

5. WHO IS RESPONSIBLE?

Organisations carry the first responsibility, because they design the products and decide what data to collect, how to treat workers and how long devices should last. Ethical practice here means thinking about the people affected before launching a feature, and not after a complaint arrives.

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Governments have a different role. They set the rules, enforce them and invest in things that markets often ignore, such as rural connectivity, digital skills and e-waste infrastructure. Laws like the DPDP Act matter, but they only help when people know their rights and when organisations are actually held accountable.

Individuals also have a part to play. We can read privacy settings, question what we share, avoid spreading unverified messages, repair or recycle devices instead of throwing them away, and speak up when a service treats people unfairly. None of this replaces the duties of companies and governments, but a more careful public makes it harder for careless practices to continue.

6. STAKEHOLDERS AND THEIR EXPECTATIONS

Technology does not affect everyone in the same way. Table 1 sums up the main concerns of different groups and the responsibilities that follow from them.

Table 1: Stakeholders, ethical concerns and responsibilities

Stakeholder	Main ethical concern	Responsibility owed to them
Users and consumers	Loss of privacy, manipulation of attention, unclear consent	Clear consent, honest design, protection of personal data
Employees and gig workers	Constant monitoring, job insecurity, unfair platform rules	Fair pay, transparency about monitoring, reskilling support
Children and students	Screen dependence, online harm, unequal access to devices	Age-appropriate design, digital literacy, access programmes
Communities and society	Digital divide, misinformation, e-waste, loss of trust	Inclusive access, accurate information, sustainable disposal
Future generations	Environmental burden, long-term data trails	Responsible innovation and sustainable production

7. RESEARCH METHODOLOGY

This study uses a descriptive research design. Primary data will be collected through a structured questionnaire shared with technology users and working professionals from sectors such as education, banking, information technology, retail and services. Most questions will use a five-point Likert scale, from strongly disagree to strongly agree, and will cover data privacy, technology at work, digital inclusion, corporate accountability and environmental responsibility. Respondents will be chosen by convenience sampling, with a target of [insert sample size] responses.

Secondary data will come from journals, books, government documents and reports of international organisations such as the International Telecommunication Union and the United Nations Institute for Training and Research. The questionnaire responses will be analysed using percentages, mean scores and a simple test of association, such as the chi-square test, to see whether opinions differ by age, occupation or level of technology use.

The study has some limitations. The sample may not represent the whole population, the answers depend on respondents being honest, and technology changes so quickly that some findings may need to be revisited after a few years.

8. SECONDARY DATA AT A GLANCE

Before looking at the questionnaire results, it helps to see what recent published data says about the issues discussed above. Table 2 brings together some of the most useful figures.

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Table 2: Selected data on technology and society

Issue	What the data shows	Source
Electronic waste	The world produced about 62 million tonnes of e-waste in 2022, and only 22.3 per cent was documented as properly collected and recycled. Generation is expected to reach 82 million tonnes by 2030.	Baldé et al. (2024)
Digital divide	About 6 billion people were using the internet in 2025, but 2.2 billion were still offline. Internet use was 85 per cent in urban areas against 58 per cent in rural areas, and 94 per cent in high-income countries against 23 per cent in low-income countries.	ITU (2025)
Gig and platform work in India	An estimated 7.7 million people worked in India's gig economy in 2020-21, and the number was projected to reach 23.5 million by 2029-30.	NITI Aayog (2022)
Data protection in India	The Digital Personal Data Protection Rules, 2025 were notified in November 2025 and are being phased in, with most obligations for organisations due by May 2027.	MeitY (2025)

Three points stand out. First, the problems are growing alongside the benefits: e-waste is rising faster than recycling, and the gig workforce is expected to roughly triple within a decade. Second, access remains uneven, and the gap between urban and rural users is large even after years of progress. Third, India has now put a detailed data protection framework in place, which means the next question is how well it will be followed in practice.

9. ANALYSIS AND FINDINGS

[Insert the results of your questionnaire here: respondent profile, key percentages and mean scores, and one or two tables or charts. Keep each finding to a short paragraph and relate it back to the objectives in Section 2.]

10. DISCUSSION

A pattern runs through the literature and the data: most ethical problems in technology come from the priorities people set, not from the technology itself. When efficiency, growth or engagement is treated as the only goal, the interests of users, workers and communities slip into the background. Both Freeman's stakeholder view (1984) and the responsible innovation framework of Stilgoe et al. (2013) suggest that organisations behave better when they ask early on who will be affected and give those people a voice.

Law and ethics are also not the same thing. Data protection laws set a minimum standard, but an ethical organisation goes further. It explains its practices in plain language, limits what it collects and takes complaints seriously. In the same way, social responsibility works better when it is built into how a product is designed than when it is added later through charity or publicity.

The data on gig work and e-waste shows why this matters. Millions of workers now depend on platforms whose rules they cannot negotiate, and the amount of discarded electronics keeps growing. In both cases, the people who bear the cost are not the people who make the decisions. The digital divide adds one more layer, because those who are offline or poorly connected often have the least say in how technology is shaped.

Finally, responsibility does not belong only to companies. Governments need to make clear rules and invest in digital access, colleges and schools need to teach digital literacy and critical thinking, and each of us needs to think about what we share and which services we choose to use.

11. SUGGESTIONS

- **Privacy by design:** Collect only the data you need, explain its use in simple language and give users real control over it.

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- **Fair treatment of workers:** Be open about workplace monitoring and keep human judgement in decisions that affect people's livelihoods.
- **Support for platform workers:** Extend social protection and clear grievance channels to gig and platform workers.
- **Inclusive access:** Design services that people with limited skills, income or ability can use, and keep non-digital options available.
- **Reskilling:** Offer training and fair transition support when technology changes the nature of work.
- **Sustainable practices:** Make devices last longer, support repair and provide take-back and recycling programmes.
- **Education and accountability:** Include ethics and digital citizenship in school and college courses, and encourage organisations to report regularly on the social impact of their technology.

12. CONCLUSION

Technology is neither good nor bad on its own. What matters is the choices people make while designing, selling, regulating and using it. As technology becomes a bigger part of daily life, ethics can no longer be treated as an optional extra. Organisations that respect privacy, treat workers fairly, include people who are easily left behind and think about the environment are not just avoiding harm; they are also building lasting trust. A human-centred view reminds us that behind every dataset, platform and device there are people whose dignity and wellbeing matter. Responsible innovation is not about slowing progress down. It is about making sure that progress is shared fairly and carried out with care.

REFERENCES

[1] Baldé, C. P., Kuehr, R., Yamamoto, T., McDonald, R., D'Angelo, E., Althaf, S., et al. (2024). The Global E-waste Monitor 2024. International Telecommunication Union (ITU) and United Nations Institute for Training and Research (UNITAR).
[2] Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. Business Horizons, 34(4), 39-48.
[3] European Union. (2016). Regulation (EU) 2016/679 of the European Parliament and of the Council (General Data Protection Regulation).
[4] Floridi, L. (2013). The Ethics of Information. Oxford University Press.
[5] Forti, V., Baldé, C. P., Kuehr, R., & Bel, G. (2020). The Global E-waste Monitor 2020: Quantities, flows and the circular economy potential. United Nations University, International Telecommunication Union and International Solid Waste Association.
[6] Freeman, R. E. (1984). Strategic Management: A Stakeholder Approach. Pitman.
[7] Government of India. (2023). The Digital Personal Data Protection Act, 2023.
[8] International Telecommunication Union. (2025). Facts and Figures 2025. ITU.
[9] Jonas, H. (1984). The Imperative of Responsibility: In Search of an Ethics for the Technological Age. University of Chicago Press.
[10] Ministry of Electronics and Information Technology. (2025). Digital Personal Data Protection Rules, 2025. Government of India.
[11] Moor, J. H. (1985). What is computer ethics? Metaphilosophy, 16(4), 266-275.
[12] NITI Aayog. (2022). India's Booming Gig and Platform Economy: Perspectives and Recommendations on the Future of Work. Government of India.
[13] Noble, S. U. (2018). Algorithms of Oppression: How Search Engines Reinforce Racism. New York University Press.
[14] O'Neil, C. (2016). Weapons of Math Destruction. Crown.
[15] Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. Research Policy, 42(9), 1568-1580.
[16] van Dijk, J. (2020). The Digital Divide. Polity Press.
[17] Zuboff, S. (2019). The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. PublicAffairs.

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