

A STUDY ON DATA ETHICS PRACTICES IN AI-DRIVEN STARTUP PLATFORMS IN MAHARASHTRA

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Abstract:

The rapid adoption of Artificial Intelligence (AI) by startup platforms has significantly transformed digital services through automation, data analytics, and personalized user experiences. While these advancements improve efficiency and decision-making, they also raise important ethical concerns related to data privacy, transparency, fairness, consent, and accountability. This study examines the data ethics practices implemented by AI-driven startups and evaluates user awareness and perceptions regarding these practices. It explores how startups collect, process, and safeguard personal information while adhering to ethical standards and regulatory frameworks. Using a structured questionnaire, the research analyzes levels of user trust, concerns about potential data misuse, and perceptions of algorithmic fairness. The findings aim to identify gaps in current data governance systems and provide recommendations for strengthening responsible AI practices. The study contributes to the broader discussion on ethical AI by emphasizing the importance of robust data governance in building user trust and ensuring sustainable growth in the startup ecosystem.

Keywords: Artificial Intelligence (AI), Data Ethics, AI-Driven Startups, Data Privacy, Data Governance, User Trust, Transparency, Algorithmic Bias, Accountability, Data Protection.

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Introduction:

In today's digital age, Artificial Intelligence (AI) has emerged as a game-changing technology that is reshaping businesses globally. Startups, in particular, are leveraging AI-driven platforms to enhance competitiveness, improve customer experiences, and streamline decision-making.

These platforms rely heavily on data collection, analysis, machine learning, and automation to deliver personalized services and predictive insights. While AI brings innovation and efficiency, it also raises significant ethical questions about data collection, processing, storage, and usage.

Data, often called the "new oil," is the foundation of AI-driven startups, which rely on large volumes of personal, behavioral, financial, and sometimes sensitive data. The ethical management of this data is essential to safeguarding user privacy, maintaining trust, and ensuring fairness. Key principles of data ethics, such as transparency, accountability, consent, security, fairness, and non-discrimination, must be upheld to prevent issues like biased AI outcomes, data misuse, or lack of user awareness.

While governments and regulators are implementing data protection laws, startups often struggle to balance innovation, cost-efficiency, and ethical compliance. Factors like limited resources, lack of awareness, and rapid

technological change make it challenging to adopt comprehensive ethical frameworks.

This research aims to explore the awareness and adoption of data ethics practices in AI-driven startups, identifying challenges and perceptions of professionals on responsible data use. The findings will emphasize the importance of ethical AI adoption for sustainable and trustworthy business growth.

Statement of Problems:

➤ **General Statement of the Problem**

The expansion of AI-based startup companies has significantly altered the way data is gathered, analyzed, and utilized for decision-making. Although these platforms improve efficiency and innovation, they also create ethical concerns related to privacy, transparency, fairness, accountability, and informed consent. While regulatory frameworks have evolved, limited empirical research exists on how startups practically implement ethical data governance, particularly given their resource limitations and rapid growth pressures.

➤ **Specific Problem Statements**

This study addresses the following issues:

1. Limited clarity in algorithmic processes and data usage practices.
2. Inadequate user awareness regarding data collection and consent.
3. Risks of algorithmic bias and insufficient auditing mechanisms.
4. Weak internal governance structures for ethical oversight.

➤ **Research Gap**

There is a lack of systematic evidence on how AI startups translate ethical principles into operational practices and how stakeholders perceive these efforts.

➤ **Central Research Problem**

There is inadequate empirical understanding of how AI-driven startups implement and manage data ethics in alignment with regulatory and ethical standards.

Significance of the Study:

The rapid development of AI-based startups has reshaped data collection and commercialization practices, raising important concerns about ethical governance, privacy protection, fairness in algorithms, and legal compliance. This study holds significance from academic, practical, regulatory, and stakeholder perspectives.

From an academic standpoint, the research adds to existing literature on AI ethics by concentrating on startup ecosystems, which have received less empirical attention compared to large technology firms. It helps examine how emerging companies apply data governance principles in real operational settings.

Practically, the findings can assist startups in strengthening transparency, improving accountability systems, addressing algorithmic bias, and enhancing regulatory compliance strategies.

From a policy perspective, the study provides insights into the challenges startups face in implementing ethical standards, helping regulators design more realistic and scalable governance frameworks.

Finally, the research supports investors and stakeholders in evaluating ethical risk management and long-term sustainability in AI-driven platforms.

Limitations of the Study:

1. Limited Sample Size

The study is based on responses collected from a limited number of participants. Since the sample size is small, it may not accurately represent the views of all professionals or AI-driven startup platforms. A larger sample could provide more reliable and generalizable results.

2. Geographical Constraints

The research is confined to a particular region or country. Data ethics practices and regulatory frameworks differ across countries, which limits the applicability of findings at a global level.

3. Time Constraints

The study was conducted within a limited time frame. Due to academic deadlines, it was not possible to conduct longitudinal research or detailed follow-up studies to observe long-term ethical practices.

4. Reliance on Primary Data

The research mainly depends on questionnaire responses. The accuracy of the study depends on the honesty and understanding of the respondents.

5. Respondent Bias

Participants may provide socially desirable answers instead of expressing their true opinions. This may affect the reliability of the collected data.

6. Lack of Technical Evaluation

The study does not include a technical audit of AI systems. It is based on perceptions rather than examining actual algorithms or data processing mechanisms.

7. Limited Access to Confidential Information

Many startups do not publicly disclose detailed internal data policies or ethical frameworks. This restricts the depth of analysis.

Objectives of the Study:

- To examine the data collection and usage practices adopted by AI-driven startup platforms.
- To evaluate the ethical challenges related to data privacy, consent, transparency, and bias in AI systems.
- To analyze compliance with data protection regulations followed by AI-based startups.
- To suggest recommendations for improving ethical data governance and responsible AI practices in startup ecosystems.

Hypothesis of the Study:

H₀ – There is no significant relationship between the level of AI adoption and the implementation of data ethics practices in AI-driven startup platforms.

H₁ – There is a significant relationship between the level of AI adoption and the implementation of data ethics practices in AI-driven startup platforms.

Review of Literature:

Existing literature on AI ethics reveals several important limitations. There is a shortage of empirical research

specifically examining ethical practices within AI-driven startups. Most available frameworks provide broad conceptual guidance but lack practical, implementation-focused strategies suitable for early-stage companies. Additionally, scholarly discussions tend to concentrate on large technology corporations, leaving startup ecosystems comparatively underexplored.

Researchers have therefore emphasized the need for further investigation in this area. Future studies should examine how startups integrate ethical principles within agile and rapidly evolving environments. Comparative research across different industries can help determine how various AI applications influence data governance approaches. Moreover, longitudinal studies are recommended to assess how ethical decisions made during early development stages impact long-term user trust, regulatory compliance, and organizational sustainability.

Research Methodology:

The research methodology outlines the systematic approach used to gather and analyze data regarding the ethical practices and user perceptions of AI-driven startup platforms in Maharashtra. Because understanding user trust and awareness is highly quantifiable, this study relies heavily on a structured, quantitative approach.

- **Sampling Strategy:** A sample size of **130 respondents** was achieved for this study. This size is statistically significant for identifying baseline trends in the local demographic. The respondents represent a cross-section of internet users who are exposed to AI technologies, providing a realistic view of the consumer market that Maharashtra-based startups are targeting
- **Research Design:** This study adopts a **Descriptive Quantitative Research Design**. This approach was chosen to accurately describe the current state of user awareness, concerns, and expectations regarding AI platforms. It provides a numerical snapshot of public sentiment, which is critical for startups looking to align their operations with user expectations.
- **Data Collection Methods:** The primary data for this study was collected exclusively through a **Structured Questionnaire**. This survey was distributed to users interacting with or aware of AI-driven platforms. The structured format—utilizing closed-ended, multiple-choice, and likert-scale questions—ensured that the responses were standardized, objective, and easy to quantify.
- **Data Analysis:** The collected data was tabulated and analyzed using percentage analysis to draw clear inferences. For example, quantifying exact figures—such as the number of users demanding data deletion rights or supporting strict regulations—allows for objective conclusions devoid of researcher bias. The analysis directly informs the subsequent sections on the challenges AI startups face and the strategic remedies they must implement.

Data Analysis and Interpretation:

Variable	Category	Count	Percentage
Gender	Male	62	47.6
	Female	68	52.3
Age	Below 18	16	12.3
	18-30	97	74.6
	31-50	15	11.5
	Above 50	2	1.5
Occupation	Student	61	46.9
	Working Professional	42	32.3
	Businessman	10	7.7
	Other	17	13.1
Qualification	Undergraduate	45	34.6
	Diploma	9	6.9
	Graduate	48	36.9
	Post Graduate	24	18.5
	Professional Degree	4	3.1

Gender Distribution:

- The sample shows **almost equal gender representation**, with slightly higher female participation.
- This ensures **balanced perspectives** on data ethics practices across genders.

Age Distribution:

- Majority respondents (74.6%) belong to the **18–30 age group**, indicating strong representation of **young professionals and students**.
- Since AI-driven startups are largely youth-driven, this age group is highly relevant to the study.
- Very limited representation from above 50, showing lesser involvement of senior age groups in AI startup ecosystems.

Occupation Distribution

- Majority respondents are **students and working professionals (79.2%)**.
- This indicates insights are mainly from individuals who are either learning about AI or actively working in digital/startup environments.
- Lower businessman participation suggests limited representation of startup founders or investors.

Qualification Distribution

- Majority respondents are **Graduates and Undergraduates (71.5%)**.
- Good academic background supports informed opinions on **data privacy, AI ethics, transparency, and governance**.
- Postgraduates (18.5%) add deeper analytical understanding to responses.

Questions	Options	Percentage	Count
What concerns you most about AI driven platforms	Data Privacy	54.6	71
	Security Breaches	10.8	14
	Lack of Transparency	11.5	15
	Job Loss	16.2	21
	other	5.4	7
Are you aware of how AI platforms collect and use personal data	Yes	63.1	82
	No	13.8	18
	Somewhat	23.1	30
Do you feel your personal data is safe on AI based platforms?	Yes	22.3	29
	No	35.4	46
	Not sure	42.3	55
Should users have the right to delete their data anytime?	Yes	76.9	100
	No	23.1	30
Strict government regulations are necessary for AI driven startups?	Yes	66.9	87
	No	11.5	15
	May be	21.5	28
Do you think AI can be biased?	Yes	42.3	55
	No	19.2	25
	Not Sure	38.5	50
How important is data ethics in AI platforms?	Extremely Important	49.2	64
	Important	46.9	61
	Not important	3.8	5
Would you trust AI platforms with sensitive personal data?	Yes	24.6	32
	No	32.3	42
	Depends	43.1	56

Interpretations:

- Data privacy is the primary concern among users, indicating strong sensitivity toward personal data misuse in AI-driven startups.
- Majority respondents are aware of how AI platforms collect and use personal data, showing a fairly informed user base in Maharashtra.
- Most respondents either feel their data is unsafe or are unsure, reflecting lack of trust and transparency in AI startup platforms.
- A strong majority support the “Right to be forgotten,” indicating demand for user control over personal data.
- There is clear public support for stronger regulatory frameworks to ensure ethical AI practices in startups.
- A significant portion believes AI systems can be biased, highlighting concerns about fairness and

discrimination in AI algorithms.

- Over 96% consider data ethics important, proving that ethical AI practices are a critical expectation from startup platforms.
- Trust levels are moderate to low. Most respondents' trust depends on transparency, security measures, and ethical practices adopted by startups.

Challenges of the Study:

The data collected through the structured questionnaire reveals a distinct disconnect between the rapid adoption of AI technologies and the comfort levels of the end-users. For AI-driven startups in Maharashtra, the challenges are no longer just technological; they are deeply rooted in consumer trust and perceived risk.

- **Overwhelming Data Privacy and Trust Deficits:** The most prominent challenge for AI startups is overcoming deep-seated user anxiety regarding data handling. According to the survey, a majority **54.6% (71 respondents)** cited "Data Privacy" as their primary concern. Furthermore, when asked if they feel their personal data is safe, **35.4% explicitly said "No,"** and another **42.3% were "Not sure."** This overwhelming lack of confidence means startups face a massive hurdle in user acquisition, as individuals are hesitant to engage fully with platforms they fundamentally distrust.
- **Conditional Trust with Sensitive Information:** Startups relying on highly sensitive data (like fintech or health tech platforms) face an uphill battle. The study reveals that only **24.6%** of users explicitly trust AI platforms with sensitive personal data. A significant **43.1%** stated their trust "Depends" on the context, while **32.3%** outright refuse. This forces startups to constantly prove their security credentials before a user is willing to convert or engage.
- **The Complexity of Algorithmic Bias:** While developers worry about the technicalities of algorithmic bias, the challenge with users is a mix of concern and ambiguity. **42.3%** of respondents believe AI can be biased, but nearly as many (**38.5%**) are "Not Sure." This indicates that startups not only have to build unbiased algorithms but also face the challenge of educating a partially unaware public about how these systems make fair decisions.
- **Socio-Economic Fears Overshadowing Tech Benefits:** Interestingly, the challenges are not limited to data alone. **16.2%** of respondents cited "Job Loss" as their biggest concern—higher than the fear of "Security Breaches" (10.8%) or "Lack of Transparency" (11.5%). Startups face the friction of public resistance driven by the broader socio-economic fear that their platforms exist to replace human labor rather than augment it.

Remedies:

To navigate the challenges highlighted by the survey, AI startups must adopt user-centric remedies. The data clearly shows that users have strong opinions on how their data should be handled, providing a roadmap for startups to build ethical, trustworthy platforms.

- **Implementing Unrestricted Data Deletion Mechanisms:** The survey data offers a clear mandate: **76.9% (100 respondents)** believe users should have the right to delete their data at any time. To remedy privacy concerns, startups must build "Right to be Forgotten" protocols directly into their user interfaces. Providing

an easily accessible, one-click option to permanently erase personal data will instantly boost user confidence and satisfy the strongest demand highlighted in the study.

- **Proactive Alignment with Government Regulations:** Rather than resisting red tape, startups should lean into compliance. A significant **66.9%** of respondents believe strict government regulations are necessary for AI-driven startups. By proactively adopting the frameworks of India's Digital Personal Data Protection (DPDP) Act and publicly advertising their compliance, startups can use regulation as a marketing tool to validate their ethical standing and win over cautious users.
- **Elevating Data Ethics to a Core Business Strategy:** The study unequivocally proves that ethics cannot be an afterthought. A staggering combined total of **96.1%** of respondents view data ethics as either "Extremely Important" (49.2%) or "Important" (46.9%). Startups must remedy trust deficits by appointing dedicated ethics officers, publishing annual transparency reports, and making their ethical guidelines as prominent as their Terms of Service.
- **Enhancing User Education and Transparency:** While **63.1%** of users claim to be aware of how AI platforms collect data, the high "Not sure" responses regarding data safety (42.3%) and AI bias (38.5%) suggest this awareness is superficial. Startups must implement educational onboarding processes. By using plain language (and localized languages like Marathi and Hindi) to explain *how* algorithms work and *why* certain data is collected, platforms can convert the 43.1% of users whose trust "depends" into loyal, confident consumers.

Conclusion:

The study highlights the importance of ethical responsibility in the digital, data-centric business landscape. AI startups are revolutionizing industries with technologies like machine learning and automation, which heavily rely on large amounts of user data, making ethical data handling crucial for sustainable growth.

The study finds that while many professionals acknowledge the need for data privacy, transparency, and accountability, the implementation of structured data ethics policies varies across organizations. Some startups prioritize user consent, secure data storage, and regulatory compliance, while others lack formal ethical frameworks. Challenges such as algorithmic bias, AI decision opacity, and the potential misuse of personal data remain prevalent.

Trust is identified as a key factor for user acceptance of AI platforms. Ethical data practices not only ensure legal compliance but also enhance brand reputation and foster long-term customer loyalty. In a competitive market, responsible AI use can be a strategic advantage rather than just a regulatory obligation.

The study also recommends that startups invest in regular audits, employee training, transparent privacy policies, and robust cyber security measures. Collaboration with regulatory bodies is essential to establish a balanced ecosystem that supports both innovation and ethics.

In conclusion, data ethics is crucial for the success of AI-driven startups. Upholding fairness, transparency, accountability, and security will enable organizations to thrive while safeguarding individual rights and societal interests. Ethical AI is necessary for responsible technological progress.



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