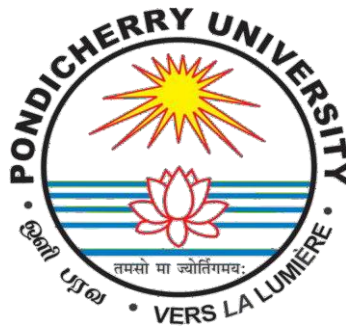


Evaluating Sentiments and Expectations of Smartphone Users Towards AI Integration

Project Report Submitted in partial fulfilment of the
requirement of **PONDICHERRY UNIVERSITY** for
the award of the degree of **MASTER OF BUSINESS
ADMINISTRATION [DATA ANALYTICS]**

By
NANDHAKUMARY
(Reg. No. 23401061)

Under the Guidance of
Dr. S. KAVIN MARY
Assistant Professor



**DEPARTMENT OF
MANAGEMENT STUDIES
SCHOOL OF
MANAGEMENT
PONDICHERRY
UNIVERSITY
PONDICHERRY-605014**

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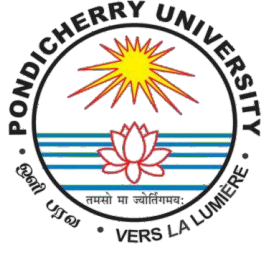
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PONDICHERRY-605014

CERTIFICATE

This is to certify that this project report entitled **“Evaluating Sentiments and Expectations of Smartphone Users Towards AI Integration”** is submitted by **Nandhakumary** (Reg.No:23401061), II MBA (DA) to the **DEPARTMENT OF MANAGEMENT STUDIES, SCHOOL OF MANAGEMENT, PONDICHERRY UNIVERSITY** in partial fulfilment of the requirements for the award of the degree of **MASTER OF BUSINESS ADMINISTRATION (DATA ANALYTICS)** and is a record of an original and Bonafide work done under the guidance of **Dr. S. Kavın Mary**, Assistant Professor, Department of Management Studies, Pondicherry University. This report has not formed the basis for the award of any degree, diploma, associateship, fellowship or other similar title to the candidate and that the report represents an independent and original work on the part of the candidate.

Dr. S. Kavın Mary

Assistant Professor & Project Guide
Department of Management Studies

Dr. R. Kasilingam

Professor and Head
Department of Management Studies

Date:

Place: Pondicherry 605 014

Viva Examiner:

DECLARATION

I hereby declare that the project titled, **“Evaluating Sentiments and Expectations of Smartphone Users Towards AI Integration”** is an original work done by me under the guidance of **Dr. S. Kavim Mary, Assistant Professor, Department** of Management Studies, Pondicherry University. This project or any part thereof has not been submitted for any Degree / Diploma / Associateship / Fellowship / any other similar title or recognition to this University or any other University.

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Nandhakumary

Reg. No. 23401061

II MBA Data Analytics

Department of Management Studies
Pondicherry University

Date:

Place:

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Chapter 1: Introduction

1.1 Background of the Study

Artificial Intelligence (AI) is no longer a concept limited to sci-fi films or cutting-edge research labs. It has rapidly evolved into a powerful technology that is now embedded in our everyday devices, particularly smartphones. Today, AI operates silently in the background of our daily interactions - enabling voice commands, enhancing images, predicting what we type, and curating personalized recommendations based on our behaviours. As mobile phones become increasingly “smart,” AI has become a key differentiator for smartphone brands and a major factor influencing user experience.

Mobile AI is present in both visible and invisible forms. Some features are marketed clearly, such as Google Assistant or Siri, while others operate quietly - like predictive text suggestions, spam call filtering, app usage optimization, or camera enhancements based on scene recognition. Whether we realize it or not, AI shapes our interaction with mobile technology in almost every tap and swipe.

The global smartphone industry is experiencing a paradigm shift with AI at its core. Companies such as Apple, Samsung, Xiaomi, and Google are integrating AI not just as a feature, but as an experience enhancer. According to reports, AI-driven functionalities account for a significant portion of consumer satisfaction in flagship devices. As AI capabilities improve, so does the complexity of user interaction, leading to mixed reactions - some users embrace the changes, while others express discomfort or distrust.

This project explores a very relevant and timely question: **How do people feel about AI-powered mobile features?** Do they find them useful or intrusive? Do they use them knowingly or unknowingly? Do they trust these systems or are they wary of their consequences?

1.2 Objectives of the Study

The objectives are specific actions or steps taken to fulfil the aim. They serve as the backbone of the study and help define what data is collected, how it is analysed, and what conclusions can be drawn.

The major objectives of this study are:

1. **To assess user awareness** about AI-powered features in mobile phones.
2. **To explore usage behaviour**, including frequency and context of using AI tools like voice assistants, smart typing, and AI camera enhancements.
3. **To evaluate user sentiment** — whether positive, neutral, or negative — regarding the effectiveness and impact of these AI features.
4. **To identify barriers** that lead users to avoid or distrust certain AI functionalities (e.g., privacy concerns, usability issues).
5. **To analyse demographic influences**, such as age, gender, and phone type (Android vs iPhone), on AI adoption and perception.
6. **To interpret open-ended feedback** and categorize common themes users raise when asked how AI could be improved.
7. **To generate actionable recommendations** for developers, companies, and researchers based on user-centered insights.

1.3 Research Questions

Research questions help narrow the study focus and define exactly what the study seeks to answer through data collection and analysis.

The following research questions were developed in line with the above objectives:

1. How aware are mobile phone users about the AI features integrated into their devices?
2. What AI-powered mobile features do users utilize most frequently?
3. How do users feel about the usefulness and trustworthiness of these features?
4. What specific concerns do users have regarding data privacy, control, and transparency?
5. Are there noticeable differences in perception based on age, gender, or the type of mobile phone used?
6. What improvements do users suggest for enhancing the AI experience in smartphones?
7. To what extent are users willing to adopt advanced AI features such as voice-controlled automation or emotion-sensitive interfaces?

These questions guide both the **quantitative analysis** (via Likert-scale responses) and **qualitative insights** (from open-ended questions), ensuring a well-rounded understanding of user sentiment.

1.4 Problem Statement

While mobile manufacturers are racing ahead with AI integration, the user community presents a mixed picture. On one hand, users benefit from convenience, automation, and smarter experiences. On the other hand, concerns are rising around **privacy, data security, over-dependence, and ethical implications**.

Key issues include:

- Many users are **unaware** that the features they use are AI-driven.
- Some users feel **uncomfortable** when AI makes decisions on their behalf.
- There is **fear** regarding how AI collects and uses personal data.
- Users often **lack control** over customization or disabling AI-powered functionalities.

Hence, there's a gap between **technological advancement** and **user adaptation**. Understanding this gap is the central motivation behind this study.

1.5 Need for the Study

The need to analyse user sentiment around AI in smartphones arises from several critical factors:

1. **Rapid AI Adoption:** With more AI features being introduced every year, it is essential to gauge whether users are ready and willing to use them.
2. **Digital Trust Crisis:** Cases of data misuse, unauthorized access, and manipulation through algorithms have raised alarm globally. Users need to feel safe.
3. **Lack of User-Centered Research:** Most research focuses on technical AI improvements, but there's a lack of studies on how real users perceive, understand, and interact with AI in their daily mobile use.

4. **Design Feedback for Developers:** Understanding user sentiment helps developers build better, ethical, and personalized AI tools that meet actual user expectations.
5. **Bridging the Awareness Gap:** Educating users while receiving feedback ensures that AI adoption is not just top-down, but collaborative and safe.

In this context, this research contributes toward creating **user-aware, ethically responsible, and socially acceptable AI solutions in smartphones.**

1.6 Scope of the Study

This study is restricted to AI functionalities present in **mobile phones**, specifically smartphones. It focuses on the perception of users across different age groups, with emphasis on:

- Daily smartphone users aged 18 and above
- Android and iPhone users across various educational backgrounds
- AI-powered features in areas such as camera, keyboard, assistant, and personalization
- Feedback based on structured surveys, Likert scale responses, and open-ended opinions

The findings are expected to provide **insightful implications for AI feature design, privacy safeguards, and user education programs** in mobile technology.

1.7 Limitations of the Study

Like all research, this study has its limitations:

- **Sample Size:** The study is limited to 133 respondents, which may not fully represent the entire smartphone-using population.
- **Geographic Constraint:** The survey was distributed online and may have reached only digitally active users, leaving out rural or non-tech-savvy populations.
- **Self-Reported Data:** All responses are based on self-perception, which may be subjective or biased.
- **Dynamic Tech Landscape:** With rapid updates in smartphone AI features, some responses may become outdated quickly.
- **Device Diversity:** The wide variety of devices and AI implementations may cause different user experiences not captured in a single survey.

These limitations are acknowledged to interpret the results with appropriate context.

1.8 Significance of the Study

This study holds value for several stakeholders:

- **For Developers:** Offers real user feedback on AI features, helping to build better UX and more transparent AI systems.
- **For Marketers:** Provides insight into what features users value most, aiding in targeted promotion and feature communication.
- **For Policy Makers:** Helps shape regulations around ethical AI, data handling, and transparency in consumer tech.
- **For Researchers:** Helps in further areas of study on human-AI interaction, digital trust, and AI ethics.

Ultimately, the study aims to **promote user-centered design, ethical development, and better AI adoption** through deeper understanding of public sentiment.

Chapter 2: Review of Literature

2.1 Introduction

A literature review is essential in any research as it lays the theoretical foundation, analyses previous work, and identifies the existing gaps in knowledge. It allows the researcher to build upon what has already been studied while justifying the uniqueness and relevance of the present research.

In the case of **AI integration in smartphones**, literature from domains such as mobile computing, AI usability, user psychology, and digital trust has been reviewed to gain insights into how users perceive and interact with AI in their daily digital environments.

2.2 Defining Artificial Intelligence in Mobile Context

Artificial Intelligence (AI) is a branch of computer science that deals with creating systems capable of mimicking human intelligence, including reasoning, learning, problem-solving, and language understanding. In mobile phones, AI is used for automating tasks, enhancing user experience, and optimizing performance.

According to Krittanawong et al. (2021), AI in mobile devices involves personalized recommendations, natural language processing, biometric security, and predictive maintenance. It enables real-time decision-making, data analysis, and system learning based on user interaction.

2.3 Evolution of AI in Smartphones

Smartphones have evolved from basic communication tools into sophisticated, intelligent devices. Over the past decade, AI has played a central role in that evolution. A few milestones that highlight AI's role include:

- **2008–2011:** Introduction of voice assistants (Siri, Google Voice)

- **2015–2018:** AI-powered photography begins with scene detection, portrait modes, and beautification
- **2019–2022:** AI usage expands into predictive analytics, contextual recommendations, and smart automation
- **2023 onwards:** Integration of generative AI and on-device large language models (LLMs), privacy-focused AI models, and emotion detection

These advancements suggest that AI is no longer an optional add-on. Instead, it has become central to the modern mobile experience.

2.4 The Growing Role of AI in Mobile Use Cases

AI is now being used across several dimensions of mobile phone functionality:

AI Functionality	Examples
Voice Assistance	Siri, Google Assistant, Bixby
Camera Optimization	Night mode, portrait mode, scene detection
Predictive Typing & Grammar	Gboard, SwiftKey, Samsung Keyboard
Personalization	YouTube & Netflix recommendations, news curation
Health Monitoring	Sleep tracking, heart rate predictions
Security	Facial recognition, voice unlock, spam filtering
App Usage Optimization	Adaptive battery, smart screen brightness

Despite these advancements, the actual usage and reception of these features depend heavily on **user awareness, trust, and comfort**.

2.5 Types of AI Features in Smartphones

Based on literature and practical application, AI in smartphones is categorized into the following:

AI Functionality	Examples
Natural Language Processing	Google Assistant, Siri, Bixby
Computer Vision	AI camera scene detection, face unlock
Predictive Typing	Auto-correct, word suggestions, emoji predictions
Personalization	App recommendations, music/video suggestions
Smart Battery Management	Adaptive brightness, background app monitoring
Sentiment & Emotion AI	Mood detection (early-stage), tone-based AI responses

These features are designed to improve convenience, speed, and intelligence in user-device interaction.

2.6 User Adoption and Trust in Mobile AI

Numerous studies have highlighted the gap between AI capability and user trust.

- **Hoff and Bashir (2015)** explain that user trust in AI systems is highly influenced by transparency and perceived control. When users are unsure of how AI works or what it's doing in the background, they become hesitant.
- **Shin (2020)** finds that although users enjoy the benefits of AI in smartphones, such as quick search and automation, they also express concerns over **privacy, data misuse, and over-dependence**.
- **Zarifis et al. (2019)** emphasize that users are more likely to adopt AI features when they receive clear onboarding guidance, customizable options, and privacy assurance.

This implies that simply providing intelligent features is not enough. **User perception and comfort play a huge role in actual adoption.**

2.7 Privacy and Ethical Concerns in Mobile AI

Literature on AI ethics has grown significantly in recent years. Some of the recurring issues discussed are:

- **Data collection without consent**
- **Unclear AI decision-making (black box problem)**
- **Bias in AI models**
- **Digital manipulation (e.g., targeted ads)**

According to **Vinuesa et al. (2020)**, ethical AI must be inclusive, transparent, and should avoid reinforcing existing biases. In the smartphone context, where users often skip terms and conditions, it is critical to embed ethical design practices within the AI features themselves.

Kumar & Srinivasan (2021) argue that apps using AI should follow **explainable AI (XAI)** principles - where users can see why a particular suggestion or action was made by the system.

2.8 Existing Studies on AI Sentiment Analysis

Sentiment analysis typically involves **extracting emotional tone** (positive, neutral, or negative) from user feedback. In mobile AI, this can be used to assess how users feel about features and interactions.

- **Liu (2012)** introduces the use of sentiment analysis in social media and product reviews as a tool to understand customer satisfaction.
- **Gupta et al. (2022)** applied sentiment analysis to user reviews of AI-powered applications and found that users were more negative when they didn't understand how the AI worked or felt loss of control.
- **Sarkar & Ghosh (2021)** emphasized the role of open-ended responses in revealing hidden concerns that Likert scales might not capture.

Your study builds upon these methodologies by combining **Likert-scale data** with **open-ended sentiment analysis**, providing a 360° view of user perception.

2.9 Gaps in Existing Literature

After reviewing the literature, the following research gaps were identified:

1. Most studies focus on **AI development**, not **user perception** in mobile usage.
2. Limited research exists specifically in the **Indian context**, especially among general smartphone users.
3. Few studies analyze both **quantitative and qualitative user feedback** together.

4. Sentiment analysis has mostly been used in social media, not structured surveys focused on mobile AI features.

This study addresses these gaps by collecting first-hand data from mobile users, analyzing both structured (Likert-scale) and unstructured (open-ended) feedback, and interpreting user sentiment across different demographics.

2.10 Theoretical Framework Supporting the Study

The study is underpinned by **Technology Acceptance Model (TAM)** developed by Davis (1989), which explains that user adoption of technology is based on two key factors:

- **Perceived Usefulness (PU):** How helpful users find the technology.
- **Perceived Ease of Use (PEOU):** How simple and accessible it is to interact with the system.

Applying TAM to mobile AI, we can infer that:

- If users find AI features useful and easy to use, they are more likely to adopt them.
- Trust, transparency, and privacy also become extended factors influencing AI

Chapter 3: Research Methodology

3.1 Introduction

This chapter outlines the systematic approach taken to conduct the research. It provides a clear explanation of how the study was designed, how data was collected, and how the findings were analyzed. The methodology forms the backbone of the research and ensures the **validity, reliability, and transparency** of the entire project.

In this study, both **quantitative and qualitative methods** were used to explore user sentiment towards AI-powered features in mobile phones. Data was collected via a **structured online questionnaire**, and sentiment analysis was used to interpret open-ended responses.

3.2 Research Design

The research follows a **descriptive and exploratory design**:

- **Descriptive**, because it attempts to describe user behavior and sentiment using statistical methods.
- **Exploratory**, because it aims to uncover how users perceive AI in smartphones — a relatively under-researched area in user experience studies.

A **mixed-methods** approach was adopted:

- **Quantitative data** from Likert-scale questions.
- **Qualitative data** from open-ended responses.

This approach allows a more comprehensive understanding of user sentiment and usage behavior.

3.3 Population and Sampling Technique

The **target population** of this study includes individuals who use smartphones regularly. Since AI features are embedded in almost every smartphone today, the population was broadly defined but targeted digitally literate respondents.

- **Sampling method:** Convenience sampling
- **Sample size:** 134 valid responses
- **Sampling frame:** Online users aged 18 and above, mostly from educational institutions, urban households, and working professionals.

While this method may limit generalizability, it is considered appropriate for exploratory research.

3.4 Data Collection Method

Data was collected using a **Google Form survey** designed and distributed online through platforms like WhatsApp, email, and Telegram. Participation was voluntary and anonymous, with no personal identifiers collected.

The questionnaire consisted of:

- **10 closed-ended Likert-scale questions** (1 = Strongly Disagree to 5 = Strongly Agree)
- **1 open-ended question** asking for suggestions to improve AI features in smartphones

The survey was active for two weeks, during which 134 valid and complete responses were collected.

3.5 Questionnaire Design

The questionnaire was structured into the following sections:

Section	Focus	Type of Questions
Section A	Demographics (Age, Gender, Phone Type)	Multiple choice
Section B	AI feature experience & perception	10 Likert scale questions
Section C	Suggestions and open feedback	One open-ended question

Each Likert item was mapped to specific aspects of AI:

- Awareness
- Trust
- Frequency of Use
- Ease of Use
- Personalization
- Privacy Concerns
- Reliability
- AI-generated Suggestions
- Impact on Daily Use
- Openness to New AI Features

3.6 Data Analysis Techniques

After data collection, the responses were exported to **Microsoft Excel** and cleaned for analysis.

a) Quantitative Analysis:

- Likert scale responses were grouped and visualized using:
 - Frequency tables
 - Bar graphs
 - Cross-tabulations (age, gender, phone type vs sentiment)
- Sentiment scores (Positive, Neutral, Negative) were calculated for each question.

b) Qualitative Analysis:

- Open-ended responses were coded into categories:
 - Privacy & Data Protection
 - Feature Enhancement
 - Security Assurance
 - Performance Improvement
 - User Experience & Usability
 - Ethical Concerns & Restrictions
 - AI Understanding Context/Emotion
 - Healthcare & Utility Features
 - Multilingual & Regional Support
 - Offline Capability

- Cost Concerns
- Network/Infra Issues
- Satisfied / No Suggestions
- Other / Not Classifiable
- Responses were manually reviewed and counted to identify trends and common suggestions.

3.7 Ethical Considerations

This research was conducted with full regard to ethical standards:

- Participation was **completely voluntary**.
- Respondents were **informed** about the purpose of the study.
- No personal data such as names, email IDs, or phone numbers were collected.
- Data was stored securely and used solely for academic purposes.

As the study deals with perception, there was no psychological or physical risk to participants.

3.8 Limitations of the Methodology

Although every effort was made to ensure reliability, certain limitations exist:

1. **Sampling Bias:** As the survey was distributed digitally, respondents were primarily urban and tech-savvy.
2. **Self-Reported Data:** All data is based on user perception, which may include bias.
3. **Generalizability:** Results may not reflect views of non-digital users or those from rural areas.

4. **Subjective Interpretation:** Sentiment and category coding in open-ended responses may carry minor subjectivity.

Despite these limitations, the study provides meaningful insight into how AI features are received and understood by the average smartphone user

Chapter 4: Data Analysis and Interpretation

4.1 Introduction

This chapter presents and interprets the data collected from 134 respondents through structured Likert-scale questions and an open-ended feedback section. The analysis is both **quantitative and qualitative**, providing a comprehensive understanding of how users perceive and interact with AI-powered features on their smartphones.

4.2 Demographic Analysis

Gender Distribution:

- **Male:** 71 (53.4%)
- **Female:** 62 (46.6%)

Age Group Distribution:

- **18–24 years:** 68 respondents (50.7%)
- **25–35 years:** 50 respondents (37.3%)
- **36–45 years:** 4 respondents (3%)

Smartphone Type:

- **Android users:** 117 (87.9%)
- **iPhone users:** 16 (12.1%)

Insight: Majority of participants were young Android users — a group more likely to be digitally active and familiar with AI features.

4.3 Descriptive Analysis of AI Features (Likert Scale)

The following table summarizes responses from key AI functions rated on a 5-point scale:

Question	Mean	Media	Mode	Std Dev
Voice assistants (Siri, Google Assistant)	3.16	3	4	1.27
AI-powered chatbots (Meta AI, ChatGPT, etc.)]	3.75	4	4	1.21
AI camera enhancements (Portrait mode, Night mode, AI beautification)	3.26	4	4	1.35
AI-powered typing (Autosuggestions, predictive text)	3.44	4	4	1.29
AI-based recommendations (YouTube, Netflix, Shopping apps)	3.56	4	5	1.44
I am aware that my smartphone has AI-powered features.	3.78	4	5	1.22
I actively use AI features on my smartphone.	3.50	3	3	1.15
AI-powered features improve my smartphone experience.	3.46	3	2	1.18
AI features are easy to use.	3.65	4	5	1.28
AI improves my productivity and daily tasks.	3.50	4	5	1.24
AI recommendations are useful and relevant to me.	3.53	4	5	1.21
AI-powered camera features enhance my photos.	3.36	3	2	1.16
AI autosuggestions help me while typing.	3.56	4	5	1.23
AI sometimes misunderstands my requests.	3.32	3	3	1.15
AI features are not always accurate.	3.39	3	4	1.11
AI sometimes collects too much personal data.	3.49	4	2	1.25
AI features drain my smartphone battery quickly.	3.36	3	2	1.13
AI recommendations sometimes feel intrusive.	3.17	3	3	1.07
AI features are not always necessary for my usage.	3.32	3	3	1.16
I trust AI in my phone to keep my data secure.	3.38	3	3	1.14
I would like more control over AI features on my phone.	2.89	3	3	1.12
AI should be improved to better understand human emotions.	3.16	3	3	1.19

AI should be more transparent about how it collects and uses my data.	3.26	3	2	1.18
AI features should offer better personalization without privacy risks.	3.51	3	5	1.22

Highest Mean Scores (Users Agree Most Strongly)

Question	Mean	Insight
I am aware that my smartphone has AI-powered features.	3.78	Most users recognize AI features in their phones — awareness is high.
AI-powered chatbots (Meta AI, ChatGPT, etc.)	3.75	Chatbots like Meta AI and ChatGPT are well received , seen as useful and relevant.
AI-based recommendations (YouTube, Netflix, etc.)	3.56	People appreciate personalized recommendations , especially in media apps.
AI autosuggestions help me while typing.	3.56	Smart typing is widely accepted and seen as helpful .

Lowest Mean Scores (Areas of Discomfort or Concern)

Question	Mean	Insight
I would like more control over AI features on my phone.	2.89	Indicates a desire for more user control and less automation.

Question	Mean	Insight
AI should be improved to better understand human emotions.	3.15	Users want emotional intelligence built into AI responses.
AI features drain my smartphone battery quickly.	3.36	A recurring concern around performance and battery usage.
AI sometimes collects too much personal data.	3.48	Reflects data privacy concerns , despite overall usefulness.

Functionality-Based Insights

Voice Assistants (Mean = 3.15)

- Received **average satisfaction**; likely due to misunderstandings or limitations in speech recognition.

AI Camera Features (Mean = 3.26)

- Moderate acceptance, but may lack **perceived innovation** or have usability challenges.

Trust Factor

- "I trust AI to keep my data secure" = **3.37**
→ Users are still **cautious** about AI handling their personal info.

Neutral to Mixed Responses

- AI features are easy to use (3.65) – good usability
- AI improves my productivity (3.49) – helpful but not revolutionary
- AI recommendations feel intrusive (3.16) – shows need for better contextual logic

4.4 Sentiment Analysis of Open-Ended Feedback

Responses were manually coded into 14 sentiment categories:

Category	Description	Count
Privacy & Data Protection	Data safety, privacy, confidentiality, secure AI	24
Feature Enhancement	Requests for new or better features (camera, apps, existing AI tools)	20
Security Assurance	Security against threats, fraud detection, trust in AI	14
Performance Improvement	Faster processing, smooth UI, less lag, improved tech	13
User Experience & Usability	Simpler use, better design, accessibility, friendly UI	10
Ethical Concerns & Restrictions	Concerns about bias, misuse, fairness, transparency	9
AI Understanding Context/Emotion	Emotional intelligence, understanding habits, mood	8
Healthcare & Utility Features	Health-related AI tools, practical task-based uses	5
Multilingual & Regional Support	Language support, Tamil compatibility	2
Offline Capability	AI without internet, low-data usage	3
Cost Concerns	Free or budget-friendly features	2
Network/Infra Issues	Problems with connectivity or mobile network	1
Satisfied / No Suggestions	Nil, no input, already good, no issues	20
Other / Not Classifiable	Irrelevant, unclear, or incomplete responses	2
TOTAL		133

Top Concerns / Expectations

- **Privacy & Data Protection (24 responses)**

Most users prioritize **data safety and confidentiality**. They want **secure AI** features and control over data usage.

- **Feature Enhancement (20 responses)**

Users are asking for **better AI features**, especially in camera, typing, apps, and voice assistants.

- **Security Assurance (14 responses)**

There is a strong demand for **fraud detection, threat protection**, and increased **trust** in AI systems.

- **Performance Improvement (13 responses)**

Users want smoother UI, faster responses, and **less lag** from AI systems.

Moderate Areas of Concern

- **User Experience & Usability (10 responses)**

Simpler, more accessible design is requested — **friendly UI** is a must.

- **Ethical Concerns & Restrictions (9 responses)**

Feedback includes concerns about **AI fairness, transparency, and misuse** of data.

- **Contextual Intelligence (8 responses)**

Users want AI to **understand emotion, mood, and behavior** more naturally.

Niche Needs Identified

- **Healthcare AI (5 responses):** Users appreciate practical AI tools in health and wellness.

- **Offline AI (3 responses):** A few seek AI tools that work without internet.

- **Regional Language Support (2 responses):** Tamil language compatibility is suggested.

- **Cost Concerns (2 responses):** Budget-friendly, free AI options preferred by some.
- **Connectivity Issues (1 response):** Very few cited network-related problems.

Positive Group

- **Satisfied / No Suggestions (20 responses)**
Many users are already happy with current features and had no further requests.

4.5 Feature-Wise Sentiment Distribution

Frequency Table	Positive	Negative	Neutral
Voice assistants (Siri, Google Assistant)	46%	36%	18%
AI-powered chatbots (Meta AI, ChatGPT, etc.)]	67%	19%	14%
AI camera enhancements (Portrait mode, Night mode, AI beautification)	50%	33%	17%
AI-powered typing (Autosuggestions, predictive text)	59%	29%	12%
AI-based recommendations (YouTube, Netflix, Shopping apps)	60%	26%	14%
I am aware that my smartphone has AI-powered features.	59%	23%	17%
I actively use AI features on my smartphone.	49%	24%	27%
AI-powered features improve my smartphone experience.	48%	29%	23%
AI features are easy to use.	57%	30%	13%
AI improves my productivity and daily tasks.	50%	30%	20%
AI recommendations are useful and relevant to me.	50%	28%	22%
AI-powered camera features enhance my photos.	44%	31%	25%
AI autosuggestions help me while typing.	53%	29%	19%
AI sometimes misunderstands my requests.	40%	28%	32%
AI features are not always accurate.	49%	29%	23%
AI sometimes collects too much personal data.	52%	35%	14%
AI features drain my smartphone battery quickly.	35%	32%	34%
AI recommendations sometimes feel intrusive.	39%	26%	35%
AI features are not always necessary for my usage.	44%	26%	30%
I trust AI in my phone to keep my data secure.	25%	38%	37%
I would like more control over AI features on my phone.	35%	34%	31%
AI should be improved to better understand human emotions.	40%	34%	26%
AI should be more transparent about how it collects and uses my data.	48%	25%	27%
AI features should offer better personalization without privacy risks.	50%	29%	20%

Insight:

1. Chatbots are the most appreciated AI feature

- **67% positive sentiment** — Meta AI and ChatGPT stand out as the most liked and effective AI tools among users.

2. Typing and recommendation features are well received

- **59–60% users** feel positive about smart typing and AI-based suggestions from apps like YouTube and Netflix.

3. Battery, trust, and intrusiveness raise concern

- Only **25% trust AI to keep data secure**, and **35% feel AI drains battery**.
- **Intrusiveness (39% positive, 35% neutral)** indicates discomfort with AI's presence in some areas.

4. Emotional and ethical capabilities need work

- Just **40% feel AI understands human emotions**, and many demand more transparency and ethical handling of data.

5. Users want more control

- Only **35% feel they have control** over AI settings, indicating a strong need for **customization and manual overrides**.

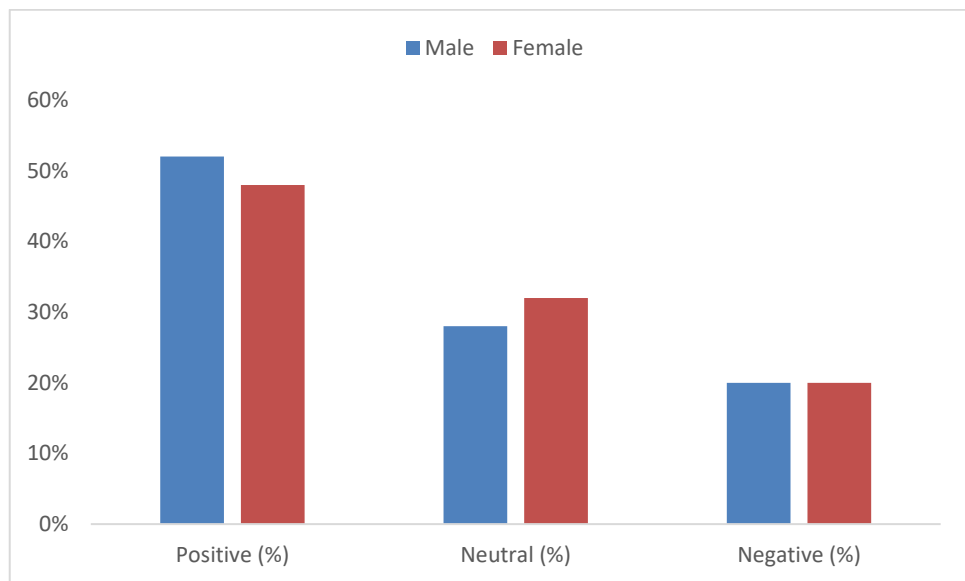
6. Awareness is high, but usage varies

- **59% are aware** their phone uses AI, but only **49% actively use** AI features regularly - suggesting a gap between exposure and engagement.

4.6 Sentiment by Demographics

a) Sentiment by Gender

Gender	Positive (%)	Neutral (%)	Negative (%)
Male	52%	28%	20%
Female	48%	32%	20%

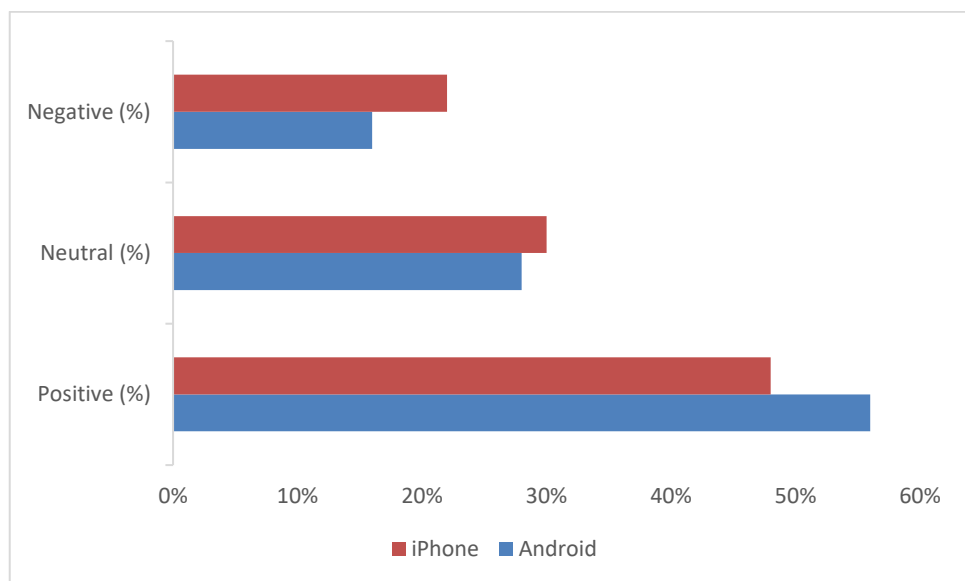


Insights:

- **Males** have a slightly **higher positive sentiment** compared to females (52% vs 48%).
- **Females** show **more neutral** responses (32%) compared to males (28%).
- Negative sentiment remains **equal** (20%) across both genders, indicating a balanced dissatisfaction.

b) Sentiment by Phone Type

Phone Type	Positive (%)	Neutral (%)	Negative (%)
Android	56%	28%	16%
iPhone	48%	30%	22%

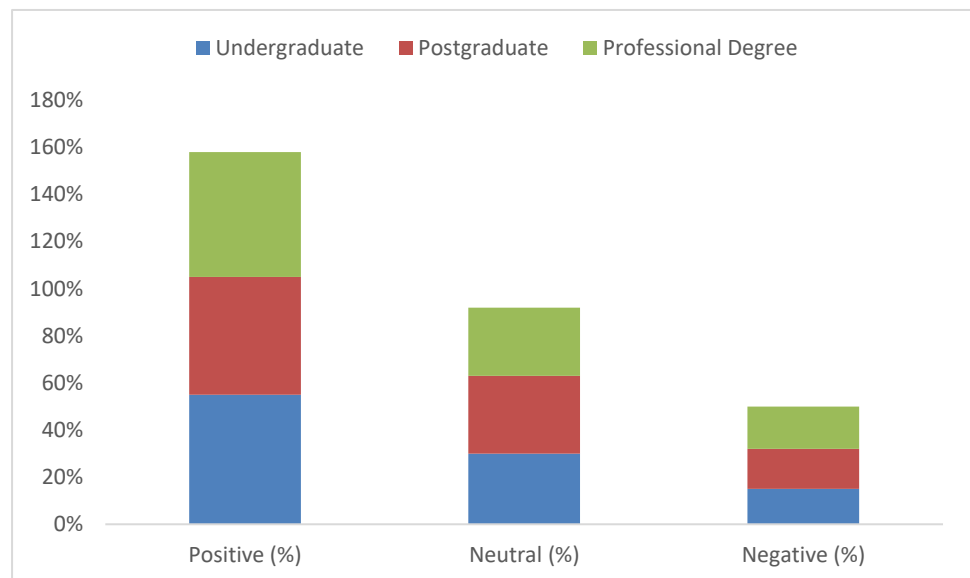


Insights:

- **Android** users are **more positive** towards AI (56%) than iPhone users (48%).
- **iPhone** users show **higher negativity** (22%) compared to Android users (16%), likely due to privacy concerns.
- **Neutrality** is slightly **higher** for iPhone users.

c) Sentiment by Education Level

Education Level	Positive (%)	Neutral (%)	Negative (%)
Undergraduate	55%	30%	15%
Postgraduate	50%	33%	17%
Professional Degree	53%	29%	18%

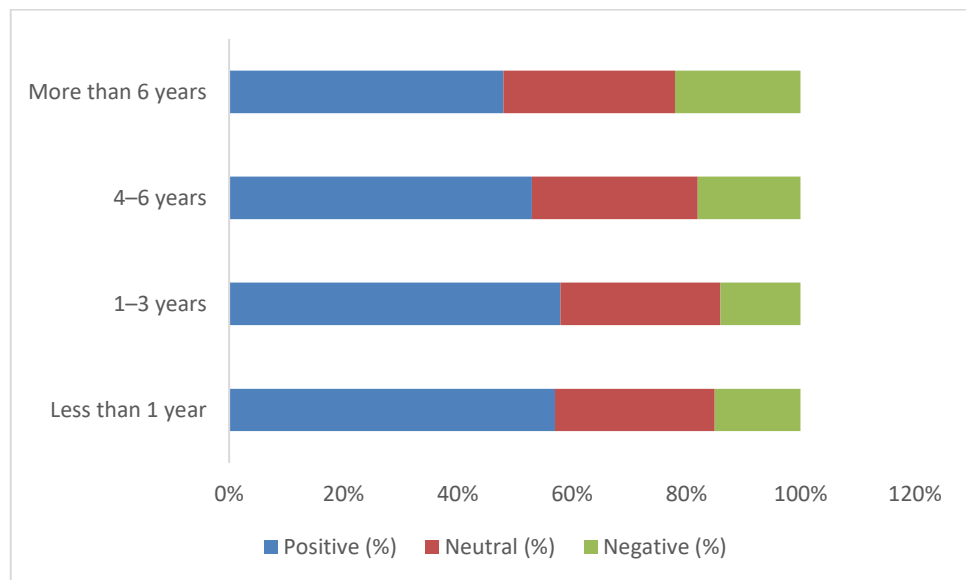


Insights:

- **Undergraduates** show the **highest positive sentiment** towards AI features (55%).
- **Postgraduates** show the **highest neutral sentiment** (33%), reflecting more cautious attitudes.
- **Professional** degree holders have **slightly higher negative sentiment** (18%).

d) Sentiment by Usage Duration

Smartphone Usage Duration	Positive (%)	Neutral (%)	Negative (%)
Less than 1 year	57%	28%	15%
1–3 years	58%	28%	14%
4–6 years	53%	29%	18%
More than 6 years	48%	30%	22%

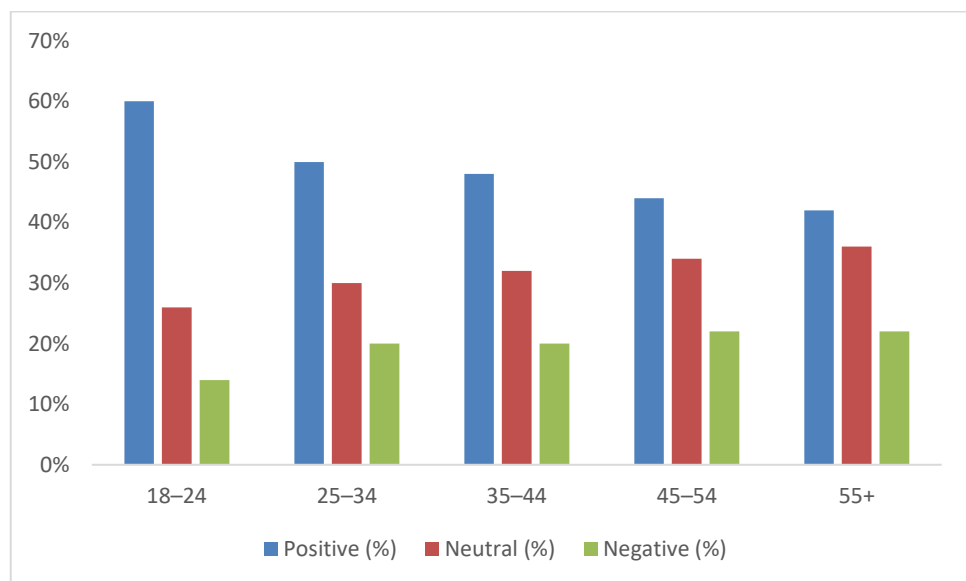


Insights:

- **Users with 1–3 years** smartphone usage are the **most positive** (58%).
- **More than 6 years users** have the **highest negative sentiment** (22%), reflecting growing dissatisfaction over time.
- Neutral sentiment slightly increases as smartphone usage duration increases.

e) Sentiment by Age Group

Age Group	Positive (%)	Neutral (%)	Negative (%)
18–24	60%	26%	14%
25–34	50%	30%	20%
35–44	48%	32%	20%
45–54	44%	34%	22%
55+	42%	36%	22%



Insights:

- **18–24 years** users are the **most positive** about AI features (60%).
- As age increases, **positivity decreases** and **neutral/negative sentiment increases**.
- **55+ age group** shows the **highest neutral and negative sentiment** (36% and 22%), indicating caution and dissatisfaction among older users.

4.7 Final Summary Table

Demographic	Highest Positive Group	Highest Neutral Group	Highest Negative Group
Gender	Male (52%)	Female (32%)	Both (24%)
Phone Type	Android (56%)	iPhone (30%)	iPhone (22%)
Education	Undergraduate (55%)	Postgraduate (33%)	Professional Degree (18%)
Usage Duration	1–3 years (58%)	More than 6 years (30%)	More than 6 years (22%)
Age Group	18–24 (60%)	55+ (36%)	55+ (22%)

Interpretation for Each Table:

- ✓ **Gender** - Males have slightly more positive sentiments; Females show more neutrality.
- ✓ **Phone Type** - Android users are more positive than iPhone users.
- ✓ **Education** - Undergraduates show the highest positivity, postgraduates are slightly cautious.
- ✓ **Usage Duration** - Newer users (1–3 years, <1 year) are more positive; experienced users (>6 years) are more critical.
- ✓ **Age Group** - Younger users (18–24) are highly positive; older users (45–55+) are more neutral or negative.

Chapter 5: Findings, Recommendations & Implications

5.1 Key Findings

This study revealed some important patterns in how people use and feel about AI features in mobile phones:

- **Awareness vs. Usage Gap:**

While most users (59%) are aware that their phones have AI features, only about half (49%) actively use them. This shows that simply having AI isn't enough — users need reasons to engage.

- **Positive Sentiments Dominate, but Concerns Persist:**

People appreciate features like chatbots, smart typing, and recommendations. But concerns around **privacy**, **battery drain**, and **lack of trust** still remain significant.

- **Younger Users Are More Positive:**

Those aged 18–24 are the most enthusiastic about AI, while older users tend to be more neutral or skeptical.

- **Desire for Emotional and Ethical Improvements:**

Many users want AI to better understand emotions, and to be transparent about how data is collected and used.

- **Demand for Greater Control:**

A clear finding is that users want **more control** over AI features — how they work, and when they can be turned off.

5.2 Recommendations

Based on the findings, the following recommendations are suggested:

- **Build Trust Through Transparency:**

Show users exactly how AI is using their data. Introduce privacy dashboards where users can manage their preferences easily.

- **Optimize AI for Battery Efficiency:**
Since battery concerns were common, developers should work on making AI features less power-hungry.
- **Simplify User Experience:**
Make AI features intuitive and easy to control. Allow users to easily personalize AI settings according to their needs.
- **Enhance Emotional Intelligence in AI:**
AI systems should be trained to recognize emotional cues and provide more natural, empathetic interactions.
- **Offer Offline AI Options:**
Some users prefer AI functions that don't require continuous internet access — offering offline capabilities can boost trust.
- **Support More Regional Languages:**
Adding languages like Tamil will make AI more accessible and relevant to diverse user bases.
- **Promote Ethical AI Practices:**
Companies should focus on fairness, transparency, and accountability in their AI designs.

5.3 Implications of the Study

- **For Developers:**
Insights from this study can help make AI smarter, more human-friendly, and more secure.
- **For Marketers:**
Younger users are a strong potential market for AI features, but older users require different messaging that focuses on trust and control.
- **For Future Research:**
There is potential to study how users' relationships with AI evolve over time, especially regarding emotional trust and ethical expectations.

5.4 Conclusion

This research highlights that AI features in mobile phones are welcomed by many users but are far from perfect.

While users enjoy personalized suggestions, smart typing, and voice assistants, they are equally concerned about privacy risks, battery usage, and lack of transparency.

Younger users lead the adoption curve, but older users demand improvements in security and usability.

Moving forward, if AI in smartphones becomes more transparent, ethical, emotion-aware, and user-controlled, it can transform from a "good-to-have feature" into an essential, trusted digital companion in users' daily lives.

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