Report On

The Impact of Hyper-Realistic AI-Generated Content on Consumer Trust and Brand Perception

By

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An internship report submitted to the BRAC Business School in partial fulfillment of the requirements for the degree of Bachelors of Business Administration.

BRAC Business School

BRAC University

January, 2026

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Faizah Nuzhat

Faizah Nuzhat
22104004

Supervisor's Full Name & Signature:

Shihab Kabir Shuvo
Senior Lecturer,
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Letter of Transmittal

Shihab Kabir Shuvo

Senior Lecturer

BRAC Business School

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Bir Uttam Rafiqul Islam Ave, Kha 224, Dhaka 1212.

Subject: Internship report on case study of research topic: “The Effect of Hyper-Realistic AI-Generated Content on Consumer Trust and Brand Perception”.

Dear Sir ,

I am delighted to present my internship report, entitled The Impact of Hyper-Realistic AI-Generated Content on Consumer Trust and Brand Perception to you with great pleasure. This report has been done in partial completion of my degree requirement after having gone through internship in Mindtree BD.

Your advice was a key in developing this project that gives an in-depth analysis of my organizational experience and primary research. I have made efforts to make this document comprehensive and that it is up to standard of BRAC University, and I believe that it is a satisfactory display of my learning.

Sincerely yours,

Faizah Nuzhat

Faizah Nuzhat

Student ID : 22104004

BRAC Business School

BRAC University

Date: January 10, 2026

Non-Disclosure Agreement

The signatory of this agreement is the undersigned BRAC University student and the host company, Mindtree BD.

The student, in its turn, concurs that the present academic work is a report on the internship, called The Impact of Hyper-Realistic AI-Generated Content on Consumer Trust and Brand Perception, and is submitted to be evaluated by the academic community only.

I also confirm that the report will not see the light of day and will not be published or revealed publicly before its intended academic purpose.

I can attest that whatever proprietary company information I had in this report was done under the explicit consent of my company supervisor.

Name of the Company: Mindtree BD

Supervisor Name: Ariful Islam

Position: Assistant Director

Department: AI & Research Department

Address: Arafa Niloy, House: 16 (1st Floor), Road: 10, Gulshan 1, Dhaka, Bangladesh, 1212

Name of the Student: Faizah Nuzhat

Address: Kha 224, Bir Uttam Rafiqul Islam Ave, Dhaka 1212

Description of the report: "The Impact of Hyper-Realistic AI-Generated Content on Consumer Trust and Brand Perception"

Executive Summary

The report will look into the internship experience in Mindtree BD, a prominent 360-degree marketing company in Bangladesh and explore how hyper-realistic AI-generated content affects consumer trust. The research integrates organizational study with primary research to determine the effect that synthetic media has in brand perception in local digital ecosystem.

The organizational analysis shows that Mindtree BD is agile in its approach to using AI tools to create content at a reasonable price and shows operational risks associated with the absence of standardized data management systems. Part project uses a quantitative survey (N=100) in order to quantify consumer sentiment. Results have shown that there is a huge Authenticity Gap, where 60-percent of respondents would less trust AI avatars than human models and 80-percent would want them to be disclosed as required. The paper comes to the conclusion that AI is efficient, but there is a reputational risk of using it without disclosure. Such practical suggestions as the introduction of a policy of Transparency First and the division of AI application into low-risk visual objects can be considered strategic.

Keywords: Artificial Intelligence, Consumer Trust, Digital Advertising, Synthetic Media, Brand Perception, Marketing Ethics.

Table of Contents

List of Tables

List of Figures

List of Acronyms

Acronym	Full Form
AI	Artificial Intelligence
GenAI	Generative Artificial Intelligence
BDT	Bangladeshi Taka
B2B	Business to Business
B2C	Business to Consumer
CGI	Computer-Generated Imagery
DV	Dependent Variable
FMCG	Fast-Moving Consumer Goods
IV	Independent Variable
MNC	Multinational Corporation
NBR	National Board of Revenue
ROI	Return on Investment
SEC	Socio-Economic Class
SME	Small and Medium-sized Enterprises
STP	Targeting, Positioning, and Segmentation
SWOT	Strengths, Weaknesses, Opportunities, Threats

TAM	Technology Acceptance Model
TG	Target Group
USD	United States Dollar
VAT	Value Added Tax

Chapter 1

Overview of Internship

1.1 Student Information

Name: Faizah Nuzhat

ID: 22104004

Program: Bachelor of Business Administration (BBA)

Major/Specialization: Major in Computer Information Management

1.2 Internship Information:

1.2.1 Internship Details

Period: 7th September 2025 to 8th December 2025 (3 months)

Company Name: MindTree BD

Department/Division: Department of Artificial Intelligence (AI)

Address: Arafa Niloy, House: 16 (1st Floor), Road: 10, Gulshan 1, Dhaka, Bangladesh

1.2.2 Internship Company Supervisor's Information

Name: Ariful Islam

Position: Assistant Director

1.2.3 Job Scope Job description/ duties/ responsibilities

At Mindtree BD, my internship was in the AI and Research Department. My position was more practical, and it was more directly involved in the workflow of the agency of creating and making strategy. The tasks that I have been assigned were multifaceted, and I could experience content generation in technical AI as well as strategic market research. My primary points of responsibility are the following:

a) Generative AI Content Creation & Prompt Engineering The generation of AI-based creative client work was my focus. This was done in several stages:

Targeting & Ideation: To begin with, I helped the team to specify the product, target group (TG), and their Socio-Economic Class (SEC) (e.g., A+, B, C; urban, semi-urban, rural). All creative decisions were determined by this profile.

Image Generation: The primary task that I performed was to create still images with the help of AI tools. This included a great deal of immediate engineering- issuing the AI with the correct instructions to specify the outfit of the character, the setting and the SEC. It is a long process, and it usually requires 10-15 attempts to achieve a correct picture that will correspond with the color of the brand and the vision of the team. These pictures would then be forwarded to the client who would approve of them and then go ahead.

Cost Management: This task as an intern was assigned to me since it is a critical, high-volume and cost sensitive part of the process. Image generation costs a lot less (5 credits) as compared to video generation (15 credits). My work contributed to saving resources in the company by perfecting the assets in the lower cost stage of images.

Contents: When interns know how to generate the right images consisting of 2-3 commands, the company redirects them to the more sophisticated task of creating videos.

b) Digital Based Competitor Research and Analysis: The second area of my major responsibility was to carry out monthly digital competitor research and analysis to our clients.

Data Collection: It was an online-based research position, so I was not working in the field. It was my role to monitor the main rivals of our clients (e.g. Frutika and Fresh of Akij are the competitors of PRAN Frooto). I examined their Facebook pages and YouTube channels to determine what they have posted in the recent past.

Key Analysis: I defined their content pillars (e.g., Awareness content, engagement content or real time festivities such as Bijoy Dibosh). I would research the kind of content they produce and contrast it with the work of our client.

Presentation to the client: I prepared this research and analysis as a monthly report for the client. This report was utilized in meetings where they would demonstrate to the client what the competition had done in the previous month and come up with new ideas, which are strategic, to use on our own content.

1.3 Internship Outcomes

1.3.1 Student's Contribution to the Company

My main input in Mindtree BD was to improve on creative and strategic delivery of the AI Department and add physical value in terms of research, generating assets, and efficiency in operations.

Generation AI Content Prototyping: I primarily contributed to the practical creation of AI-generated creative content. Creating an image, client-ready, is a lengthy process that may take 10-15 attempts to refine the prompt. Through the intensive process, I was able to save the time of the senior team and save a lot of money in the generation of AI since image credits

are considerably cheaper than video credits. This made the agency offer more creative options to clients.

Competitor Analysis and Strategic Research: I was assigned to do monthly competitor research (digital based) on major clients, including PRAN. This included scrupulously monitoring the social media of their primary competitors (e.g., Frutika, Fresh) (Facebook, YouTube). I dissected their content pillars, campaign themes, and engagement strategies and put them together into a proper research presentation to the client, which was in turn used to suggest new, data-driven creative ideas.

Skill Development and Workflow Contribution: I could come up with accurate on-brand images with 2-3 commands as I got more skillful at prompt engineering. This development showed that the training investment in the company is well paid off. My work was directly related to the workflow of the agency, which provided a continuous flow of assets to the subsequent step of the production of the video.

1.3.2 Benefits to the Student

The invaluable experience that this internship offered was an introduction between theory and the actual practice of the industry. The benefits I gained are:

Technical Skills: I have acquired practical and technical experience in fast-tracked engineering and the utilization of current and advanced generative AI technologies in the creation of both still and video. This is a very demanded competence at the head of the marketing business.

Strategic Marketing Acumen: I got to know the entire strategic process of an advertising firm, that is, how to define a target group (TG) and a socio-economic class (SEC) of that target group, as well as how to create creative ideas that can match a brand and its identity.

Professional Research and Analysis: I gained knowledge about how to perform a formal competitor analysis, synthesized online information provided by various sources (Facebook, YouTube) and pinpoint content pillars and how to present such data in a professional client-focused form.

Adaptability and Problem-Solving: I gained important soft skills in adaptability and problem-solving, specifically in learning how to read the visualization of a creative team and to learn how to convert their abstract concepts into concrete AI-generated outputs.

Experience in Contemporary Work Culture: I was fortunate to be exposed to a highly participative and decentralized corporate culture, and this experience taught me about the importance of teamwork, open communication and personal responsibility.

1.3.3 Problems/Difficulties (faced during the internship period)

My main issue was a conceptual issue, not technical. It was the challenge of completely matching my creative performance with the visualization in the brains of the departmental heads or creative directors. During the first stage, my perception of what is meant by a prompt would be different to what they intended to achieve. This implied that one could not just perform the task and then I had to learn how to pose finer questions and to have a profound grasp of the abstract creative idea before I could perform it to their satisfaction. This cyclical task though difficult was very important in my learning.

1.3.4 Recommendations (to the company on future internships)

My experience has been gained; hence, I would like to make two small suggestions regarding how to improve the internship program at Mindtree BD:

Conduct a Structured "Visualization" Brief: To reduce the divide between the vision of the company and the implementation of the company by the intern, I would suggest a simple structured reverse brief process. Once an intern is given a task, he or she may jot down his/her comprehension of the concept, the salient visual clues, and the final appearance in few bullets. This can then be approved within 30 seconds by a senior to achieve the alignment before the generation process which is time-consuming starts.

Build a common Shared Library: The agency can develop a document or an Excel sheet in which workers post their most successful prompts with certain tasks (e.g., "prompt for a sober urban character," "prompt for a hip-hop environment). This would create a treasured internal knowledge base, accelerating the learning curve of new interns by a wide margin even of full-time employees.

Chapter 2

Organization Part

Figure 1: Logo of Mindtree

2.1 Introduction

This chapter gives an in-depth profile of Mindtree BD as an organization. Being a Marketing Intelligence Agency, its prosperity is not only upon its creative output but also upon its internal management, strategic positioning as well as the operating systems. The AI department has offered me a special perspective to see these intertwined functions because of my internship in the department.

The chapter given will examine the entire operational system of the company, its history and structure, management and marketing practices in specific. It shall critically analyze its position in the competition landscape of Bangladesh advertising industry and shall end with a summary and recommendations of the findings.

2.1.1 Objective(s)

The main goal of this chapter is to offer an overview of the business operations of Mindtree BD in a holistic manner. The secondary objectives are to:

- Examine the company's organizational structure, mission, vision and values.
- Review its management practices such as leadership style and human resource policies critically.
- Review its marketing plans, competitiveness, and systems.

- There is a need to conduct a formal SWOT and Porters Five Forces analysis to establish its strategic strengths and weaknesses.

2.1.2 Scope of Study

The paper will be restricted to the operations of Mindtree BD. This is an analysis of its non-financial practices performed since its debut in 2016, such as management, marketing, and information systems. The financial performance is not studied in-depth, because the financial statements are not public.

2.1.3 Methodology

This chapter takes qualitative research methodology. The analysis will not be done in quantitative measures but will be a synthesis of data between primary and secondary sources to construct a comprehensive picture of how operations are conducted in the company.

a) **Primary Data Source:** The primary data was collected using direct participatory observation at workplace as the internship program progressed. This contains observations of work processes daily, group meetings, and informal communication with managers and coworkers.

b) **Secondary Data Source:** A review of the official company documents is greatly used in the process of analysis. This report presented facts about the history of the company, its clientele, services and structure of the organization.

2.1.4 Significance of Study

The analysis is important because it will give a rare internal overview of a contemporary, data-driven advertising agency in Bangladesh. It links the academic theories of management and marketing to practical use, providing valuable input to the students, as well as the organization itself.

2.1.5 Limitations

This analysis is capped with the fact that I am an intern, and I therefore had limited my scope to the AI and the creative departments. My experience in high level corporate strategy, finance and compensation is in observation and anecdotes given by the employees, not data of the executive level. The company has not publicly listed and therefore there were no formal financial reports to analyze.

2.2 Overview of the Company

2.2.1 Historical Background and Legacy

Mindtree BD The company was established in 2016 under the name of a marketing intelligence agency. It has a fundamental philosophy, which is, we don't guess. We know. And we design to be a company that values information and intelligence over unadulterated guesswork. Since its establishment, the agency has tried to integrate data, creativity and cultural understanding to come up with brand stories that appeal to the target audience.

2.2.2 Mission, Vision, and Core Values

The company has a clear sense of direction that is reflected by the following set of principles:

Figure 2: Mindtree's Core Values

- **Vision:** To be the top Marketing intelligence powerhouse where brands are made on the truth, and strategy on storytelling.
- **Mission:** To be the leader in marketing and brand communication through establishing sustainable relationships and contributing to growth, prosperity, and brand equity.
- **Core Values:** The culture of the company is founded upon four major pillars:
- **Creativity:** Converting business challenges into radical and innovative ideas.
- **Branding:** Making brands real with actual consumer intelligence.
- **Growth:** Connecting brands with the people who matter to fuel growth.
- **Proficiency:** The quality of work should always be excellent.

2.2.3 Organizational Structure and Key Divisions

Mindtree BD is a 360-degree agency, which has a functional organizational structure. Firoza Begum and Ikbal Al Mahmud are the Chairman and Managing Director of the company respectively.

The operations are separated into specialized departments with the head of each department reporting to the leadership. This framework enables high level of professionalism of each service area. The key departments include:

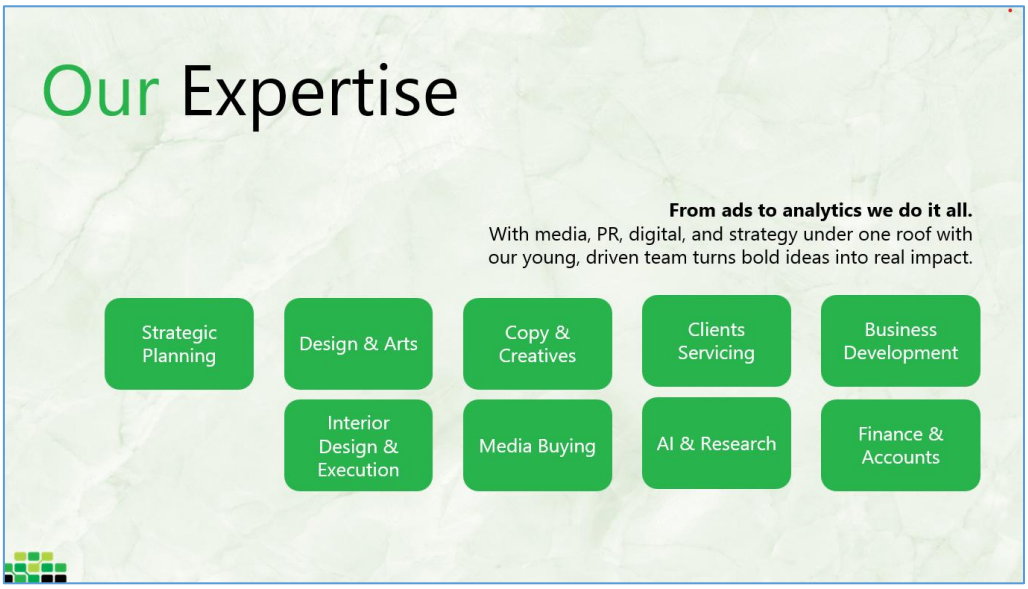


Figure 3: Mindtree's Expertise

This arrangement helps them to sustain their 360-service model that consists of Advertising, Digital Advertising, Production (TVC/OVC), Media and PR, and Interior Design.

2.3 Management Practices

2.3.1 Leadership Style at Mindtree BD

As per my observation, the leadership style at Mindtree BD can be conveniently described as participative and democratic leadership. The company culture is highly amiable and decentralized. It does not have a strict boss/employee hierarchy but rather each group member's opinion is considered and heard during project discussions.

The individual employees are not micromanaged by the Managing Director and the Chairman. Rather, they give some authority to the department heads who in turn have their teams to take care of their output and performance. This decentralized structure creates a spirit of ownership and responsibility in each department and is ideal in its industry that is largely creative; collaboration and a free flow of ideas are key to reaching its objectives.

2.3.2 Human Resource Management and Recruitment Process

The Human resource department under the leadership of the Senior Manager, HR, has strategic and experienced- and maturity-oriented recruitment process.

- **Recruitment and Selection:** Circulars on professional sites such as LinkedIn and BDJobs are used as the starting point of the process. The HR department sieves the CVs according to the requirements of the department. Relevancy is based on the first aspect, which is relevant working experience. For example:
- **Creative Department:** Applicants would need a portfolio as well as familiarity with software in design (Photoshop, Illustrator, 3D Maya).
- **Business Development:** Applicants are examined based on their ability to communicate and current connections in the industry.
- **Client Service:** Preference is made to candidates who have previously worked in the agency.

It is planned that the company will filter based on the duration of experience (e.g., 2-3 years vs. 5-6 years) and will choose the level of maturity and the possible training resources needed, focusing on the recruitment of experienced professionals who can be introduced into the company within a short period of time.

2.3.3 Compensation and Benefits

Although the specific data on salaries was not presented, the compensation philosophy of the company seems to be staff centered and aimed at employee welfare and safety. The organization has got extensive coverage in certain life crisis situations. As an example, in case an employee is involved in an accident, the office is said to cover all the medical costs. Moreover, the company offers maternity leave that is paid in full salary, and this is an indication that it cares about its employees.

2.3.4 Training and Development Initiatives

Mindtree BD spends on the incessant development of its staff. The office supports and covers all expenses of various training programs. This is in form of online based training with foreign vendors which is essential in keeping up with the latest trends in the world of marketing and technology. The company also attends to the overall well-being of employees and personal development by covering their involvement in the programs at the Quantum Foundation.

2.4 Marketing Practices

2.4.1 Marketing Strategy

Mindtree BD uses a powerful strategy of B2B marketing which does not rely on self-promotion but on two principles:

- **Competitive Pricing:** The agency would be a high-value alternative to the best of the best agencies such as Grey or Asiatic. It will also allegedly sell the same design or service at a lower cost but maintain the quality to be of high quality.

- **Service Excellence:** The agency is based on the model of limited profitability, and it does not focus on the maximization of its own profit margins on each project but on the provision of the most effective possible service and support to its clients.

2.4.2 Targeting, Positioning Strategy and Target Customers

Target Customers: Mindtree does not focus on small enterprises but large well-established national and multinational companies. This is seen in their impressive client list, which consists of giant companies in the industry such as PRAN, RFL, KSRM, Crown Cement, Walton, Toyota and City Bank.

Targeting and Positioning (STP): The agency has a consistent STP process, which it applies on behalf of the clients. The initial move, as I could observe in my work, is to study the product of the client (e.g., PRAN Frooto) and to pinpoint the target segment. Such a group is further divided into categories based on Socio-Economic Class (SEC), geography (urban, semi-urban, rural), and psychographics (e.g. hip-hop or sober youth). This is a very specific targeting profile that makes every creative decision, including the AI-generated characters, the environment of the campaign, and the dialogue.

2.4.3 Marketing Channels

Mindtree, being a full-service digital agency, is expert in all the important marketing channels on behalf of its client who are mostly:

- **Meta:** Instagram, Facebook, and Thread.
- **Google:** Search Engine Marketing (SEM), Google Display Network (GDN), and YouTube.

2.4.4 Product/New Product Development and Competitive Practices

The most essential competitive practice of the agency is to be the first to adopt AI aggressively. The whole AI and Research Division acts as a new product development generator, designing AI-based processes of image and video-generation. This gives Mindtree an opportunity to present the clients with a new, inexpensive and fast way of creative prototyping in contrast to slower and more traditional agencies.

2.4.5 Branding Activities

The name of Mindtree and its tagline which is: A Marketing Intelligence Agency form the basis of the brand. This makes the company a strategic and data-driven partner and not a mere creative vendor. It does not advertise its brand but instead builds it through its work, a list of its clients and through the fact that it mixes data (intelligence) and creativity (marketing).

2.4.6 Advertising and Promotion Strategies

Mindtree will not apply for personal promotion or advertisement to get new clients. The whole business development model of this company is based on referral and linkups. The approach that the agency uses is to provide outstanding work to a big client such as PRAN who will in turn refer them to another big company. Their high quality, low-cost service strategy has been demonstrated to be working as they have utilized this word-of-mouth model to develop a strong and sustainable growth cycle.

2.4.7 Critical Marketing Problems and Gaps

Depending on referrals as a strength is a weakness that should be exploited in the future. The development of the agency is also connected to the network that it possesses, which might inhibit its entry into new, untapped industries in which it is not linked. It does not have the

formal business development or advertising pipeline to get the so-called cold leads; it might be a gap should their key clients decrease their marketing budget.

2.5 Financial Performance and Accounting Practices

The analysis of financial performance will consist of the following elements:

Overview and Limitations Mindtree BD is a privately owned limited company in the advertising and marketing industry of Bangladesh which is very competitive. As opposed to publicly listed companies (PLCs) which are obliged by the Bangladesh Securities and Exchange Commission (BSEC) to publish audited quarterly and yearly financial statements, the private limited companies are not obliged to print their detailed financial statements to the general audience. The financial statements, including: the Statement of Financial Position (Balance Sheet), Statement of Profit or Loss (Income Statement) and Cash Flow Statement, are, therefore, classified and only available to internal stakeholders and to regulatory authorities such as the National Board of Revenue (NBR).

If such a confidence exists, then a conventional quantitative financial analysis, such as Ratio Analysis (Liquidity, Solvency, Efficiency, Profitability), Trend Analysis or DuPont Analysis framework cannot be performed in this report. The actual numbers regarding Revenue, Net Profit Margin, Return on Assets (ROA) or Return on Equity (ROE) of the past 3-5 years cannot be subject to scrutiny by the public or by academics.

Nevertheless, the fact of its operational growth and client base allows drawing qualitative indicators of financial health.

Stability of Revenue: The fact that PRAN, RFL and City Bank are high profile and long-term clients implies a consistent and recurring stream of revenue, probably because they are retainer-based models prevalent in the agency world.

Growth Trajectory: The team growth, as well as the introduction of the separate departmentalization such as AI and Research, demonstrate the good financial liquidity and the ability to reinvest the profits into innovation and personnel development.

2.5.2 Accounting Practices

According to the operational observations and internal workflows, Mindtree BD follows a systematic set of accounting practices created taking into consideration the fact that the company is a service-oriented business, which operates using multiple currencies.

Accounting Approach Hybrid Accounting Mindtree BD applies a **hybrid approach** to accounting, that is, both Cash Basis and Accrual Basis accounting techniques, depending on the type and value of the client transaction in different currencies. This strategic differentiation assists the agency to deal with cash flow effectively in addition to alleviating the foreign exchange and credit risk.

- **USD Transactions (Cash Basis / Advance Payment):** The agency is an Advance Payment agency as far as international transactions or services are quoted in United States Dollars (USD) - most likely the purchase of digital media on platforms like Meta (Facebook) or Google, or the payment of high-end AI tools. The money is received by the client prior to the service being provided or media budget is incurred. This is in line with the Cash Basis of accounting whereby revenue is recognized upon receipt of cash. This would cushion the agency against currency fluctuation risks and guarantee affordability to make immediate payments to international vendors, who normally demand advance payments.
- **BDT Transactions (Accrual Basis / Post-Payment):** In the case of local transactions, which were based on Bangladeshi Takas (BDT) e.g. creative design fee, strategy consultation, or local production cost, the agency was under Accrual Basis of

accounting. Under this model, the service is provided initially, and a formal bill or invoice is provided to the client upon the provision of the service. The payment is made later, upon the agreed terms of credit. Revenue recognition here is at the time of earnings (at the end of completion of work), but not at the time the cash is received. This is the norm when it comes to B2B service contracts in Bangladesh, where corporate clients can make payments according to their procurement processes.

Accounting Cycle and Operations Although specific ledgers were not available, the agency operates in accordance with conventional steps of the accounting cycle in order to control the finances.

- **Invoicing and Billing:** There are strict procedures during invoicing which are done upon the completion of the project to BDT clients.
- **Expense Tracking:** The overheads are monitored by tracking the expenditure of the business on employee wages, rent and utility bills.
- **Reconciliation:** Since both currencies are in use then it is assumed that bank accounts (probably in two accounts in BDT and the foreign currency) should be reconciled regularly to maintain consistency between the internal records and the bank statements.

Disclosure and Compliance As a private company, the financial disclosures of Mindtree BD are mostly addressed to tax authorities. The company has been adhering to the local financial laws such as:

- **VAT & Tax:** The deduction and deposit Value Added Tax (VAT) and Source Tax on the bills according to the regulations of NBR.
- **Audit:** The outside chartered accountants audit the annual financial accounts to ascertain that they comply with the Companies Act, 1994, although this is confidential.

Overall, and unfortunately, detailed financial metrics are not publicly available but the accounting practices used in Mindtree BD reflect a sound financial strategy. The dual-method strategy (Advance for USD, Credit for BDT) is a complex interpretation of managing the cash flows in the unstable economic context to keep the agency afloat and able to finance its activities and innovations.

2.6 Operations Management and Information System Practices

a) **Information Systems/Data Storage:** The information system used at Mindtree is basic and not advanced. The company is not a large company yet and its data management is appropriate. All the information analysis is done under the guidance of Microsoft excel along with a formula. It does not have a central server or cloud-based database.

b) **Data Storage:** Every employee will be provided with personal hard disk of their laptops. The information about the company and clients is stored in these drives. A hard drive is emptied and replaced with a new one when it is full. All data storage is done through this practice.

c) **Information Sharing:** Information, which is client facing like legal documents (Trade License, TIN/BIN certificates) is shared as PDF files. On the inside, data will be acquired online and put down in Excel or done by hand using surveys.

d) **Quality and Operations Management:** The company is not provided with any formal software in terms of quality management or project management. The department heads are the only ones relied on in the operations management. Each head provides dictations on the workflow of his or her team. Although this is flexible it is a sign that there are no standardized operations processes in the agency.

2.7 Competitive Analysis and Industry

2.7.1 Porters five forces analysis

a) **Threat of New Entrants (Moderate):** Starting an agency is cheap in terms of capital cost; however, it is expensive to enter. The success of Mindtree is anchored in its link-up and referral system with large companies. A newcomer would have no such high-level trust and portfolio, and it will be extremely hard to compete with clients such as PRAN or Toyota.

b) **Bargaining Power of Buyers (High):** The buyers are big and advanced companies (PRAN, RFL, Walton). They possess much power and can (and do) claim high quality of work at low costs. This is the whole foundation of the low-cost, high-quality strategy of Mindtree. One can also see the power of the client in creative process where a client has the final say on any assets.

c) **Supplier Bargaining Power (Moderate-High):** There are two suppliers, namely:

- **Talent:** There is a high demand for experienced creative and strategic talent. It is interesting to note how the company favors the employment of mature employees with experience of 5-6 years to avoid in-service training, proof of the fact that talented abilities can be offered at a higher price.
- **Technology:** AI department is dependent on foreign AI vendors. These platforms are essential to the working process and are credit-based, which provides them with an important pricing force.

d)Threat of Substitute Products or Services (High): The main substitute is an in-house marketing team of the client. A business such as PRAN enjoys the luxury of having an enormous marketing department that may opt to undertake campaigns internally. These alternatives are smaller freelance teams or niche boutique agencies (e.g. a video-only shop).

e) Competition among the incumbents (High): There is stiff competition in the industry. Mindtree is in direct competition with the best international agencies and other local agencies (Grey, Asiatic). The head-to-head competition in the same client projects was evidenced by the research conducted by my competitors Frutika (Akij) and Fresh.

2.7.2 SWOT Analysis

a) Strengths:

Proven Low-Cost, High-Quality Service Model: The company has a long-established model of low-cost and high-quality service.

- **Good Referral Network**: The company has a strong referral network based on a strong word-of- mouth network of happy high-profile customers.
- **Strong Client List:** An eclectic mix of industry-leading customers (PRAN, RFL, Toyota) which offers stability and prestige.
- **360-Degree Service Model:** Capacity to cater to clients as brand strategy up to media purchasing and interior design.
- **Agile and Participative Culture:** A decentralized, amicable and non-hierarchal organization that supports creativity.

b) Weaknesses:

- **Inadequate Scalable Infrastructure:** It is not scalable because all data storage is done through personal hard drives and Excel which may be considered as a serious operational risk.
- **Lack of Standardized Processes:** There is no standardization in the operations management since it is entirely left to the heads of departments, which may be inconsistent and ineffective.

- **Weak Business Pipeline:** The agency is more susceptible to the risk of losing its long-term clients or reduced budgets due to its complete reliance on referrals (also known as linkups).
- **Absence of Formal Complementary Training of Juniors:** It is possible that there is a deficiency in the formal training mechanisms of complementing junior talent as the preference tends towards recruiting "pro" employees who have 5-6 years of experience.

c) Opportunities:

- **First in AI Marketing:** The opportunity is marked in my internship project on the effect of AI. The agency can establish itself as the best AI-First creative agency in Bangladesh.
- **Cross-Sell Services:** Take advantage of the trust of your current customers (e.g. PRAN) to sell them other services, e.g., Interior Design of their corporate offices or Media Buying of all their brands.
- **Standard Business Development:** The agency may create a formalized business development group that is willing to proactively pitch new clients in industries with which the agency has no linkups.
- **Create Own Pro Tools:** They may not use Excel only but may invest in some simple internal software or central database to coordinate workflow and data.

d) Threats:

- **Strong Competition:** Head-to-head competition with well-established giants (Grey, Asiatic) and other agile agencies.
- **Client Reductions to the Budget:** when the economy is weak, its big clients may reduce their marketing budget, and this would directly affect the revenue of Mindtree.
- **Technological Arms Race:** The generative AI sphere is running at a lightning pace. Rival companies will have an opportunity to use superior, quicker, or less expensive AI tools that will destroy the existing benefit of Mindtree.

- **Key Employee Departure:** Since key employees are needed in each department, in case one of the key heads departs, they might bring their workflow that lacks standardization and their relationships with clients.

2.8 Summary and Conclusions

In this chapter, the author has made an insightful analysis of Mindtree BD as a Marketing Intelligence Agency. The results confirm the fact that the company is a strong and nimble player in the Bangladeshi advertising market. Its core competency is a strict and disciplined approach, which consists of offering the highest quality and the most comprehensive marketing services at an affordable price point compared to its primary competitors, and the leverage of a strong referral base created through its upper-end customer base.

Another strength that can be discussed is its internal culture, which is a participative and decentralized culture of leadership which enables its highly experienced teams that are led by departments. The aspect of the early and practical use of AI as a fundamental creative tool is a unique competitive advantage of the company.

Nevertheless, it can also be noted during the analysis that the operational infrastructure of the company has failed to match its strategic success. Its use of individual hard drives to store data and its use of Excel to do all the necessary information analysis, coupled with the unstandardization of its operational processes poses a great deal of inefficiencies and risks. Although its referral-based business model is very effective, it is also a drawback that is a single point of failure.

To sum up, Mindtree BD is a typical entrepreneurial success story: an agency that has managed to grow fast with the help of talent, customer relations, and strategic response. Its next stage of evolution will necessitate its investment in the internal systems and scalable processes that will

enable it to change into a non-large company into a genuine marketing intelligence powerhouse as its vision is.

2.9 Recommendations/Implications

According to the full analysis of the organization presented in this chapter, the following recommendations are offered to overcome the identified weaknesses and take advantage of the opportunities:

- **Install a Centralized Data Management System:** The immediate solution needed is to change the system of individual hard drives to a secure and centralized storage facility. Such a simple solution as a Network Attached Storage (NAS) server or a safe cloud-based platform (such as Google Workspace or Microsoft 365) would help to avoid catastrophic data loss, enhance the level of security, and enable a smooth and efficient collaboration instead of an ad-hoc and Excel-based workflow.
- **Standardized Important Operational Processes:** Although department head autonomy is desirable in creativity, this does not imply that the agency should not standardize important processes that are not creative. It involves the adoption of a company-wide Project Management (PM) tool (e.g., Trello, Asana, or ClickUp) to pay attention to tasks and deadlines, along with developing a standardized client onboarding and digital file management process. This will eliminate the dependency on key people and increase efficiency.
- **Babylonian Cultivate the Business Development Pipeline:** As much as the link-up approach is a potent resource, it needs to be complemented with a formal business development approach. The agency must recruit at least one business development professional in the agency who can be proactive and build relationships and pitch to new

clientele in new industry that the agency does not have in their portfolio to mitigate risk and generate new growth opportunities.

Chapter 3

Project Part

3.1 Introduction

3.1.1 Background and Problem Statement

Background of Study

The entire digital advertising and marketing world is now, literally, shifting on a tectonic plate, and the basic key factor to this change is the high rate of progress and adoption of Generative Artificial Intelligence (GenAI). This technological revolution is not a groundbreaking, but a total paradigm change in the very idea of visual content conceptualization, creation, and consumption. In the case of integrated 360-degree marketing agencies like Mindtree BD, that boast of providing state-of-the-art creative solutions to executive clients, tools like Midjourney, DALL-E 3, Stable Diffusion, and RunwayML have moved beyond experimental gimmick to being requisite resources in the creative workflow.

The technologies are highly efficient and scalable. They enable a hyper-realistic look to be prototyped in a short time, virtual brand ambassadors to be generated without aging and tiring, and elaborate and high-fidelity story boards can be produced with a fraction of the cost and time of more conventional production techniques. It is transforming the business model of the agency where it used to rely on physical shoots due to their resource-intensive nature; the logistics, models, makeup artist, and location permits could have eaten up the whole resources of the agency, but now it is an agile, fast-based content creation that can be performed simultaneously by a single workstation.

But this technological breakthrough presents a very important ethical and strategic dilemma, commonly known as the Authenticity Paradox. The fact that AI-generated content grows so close to reality makes it a challenge to the basic trust that a consumer and a brand have. Brand equity is traded in trust and once this is lost it is very hard to earn it back. Considering the variables in the digital literacy rates of the targeted demographic groups (rural or urban, Gen Z or Boomers), the use of hyper-realistic AI figures, which are marketed as real humans, is accompanied by acute questions of consumer security, truth in advertising, and brand loyalty in the context of the Bangladeshi market.

Problem Statement

The central issue that is the focus of the present research is the possible disillusionment of consumer confidence as a result of the hyper-realistic AI. When people are betrayed by artificial media - when an appearance of an AI avatar is taken as the appearance of a real human or even demonstration of a product, brands face the risk of losing the reputation on the spot as well as losing credibility in the long-term. The effect of the uncanny valley is being superseded by the Deception Effect where the perfection of the image, in itself, is a cause of suspicion [1].

The research question in this work is thus as follows;

The absence of empirical evidence on the capacity of Bangladeshi consumers to discriminate hyper-realistic AI content and the resultant effect of the latter on brand trust is a strategic blind spot to agencies. In the absence of clear vision of the trust threshold of the consumer expectations of the transparency, the agency such as Mindtree BD will be forced to lose its main audience by implementing technologies that might be seen as fraudulent by the consumers in place of innovative ones. The ethical application of these tools in the Bangladeshi advertising industry has no localized system to use.

3.1.2 Research Objectives

The objectives that the study is aimed at include the following specific, measurable objectives:

- **Primary Objective:** To critically examine the effects of hyper-realistic AI generated advertising materials on the trustworthiness of consumers and brand perception in the Bangladeshi digital ecosystem.
- **Secondary Objectives:**
    - **Measure Awareness:** To measure the level of awareness of local customers towards the level of prevalence and the visual aspect of AI-generated content in internet advertising. This is with respect to whether the consumers are aware of the existence and use of such technology.
    - **Measure Trust Deficit:** To estimate the influence the particular decline in trust (Trust Deficit) when consumers learn that an engaging personality, influencer, or product demonstrator is not a human being, but an artificial avatar.
    - **Test Disclosure Effects:** To calculate the statistical relationship between Transparency (Disclosure), i.e., the act of disclosing the content which is labeled as either AI-Generated or Synthetic, and the preservation of Brand Credibility.
    - **Examine Demographic Variables:** To examine the effect of various demographic variables (Age, Gender, Social Media Usage) moderating the association between AI content reception and trust.
    - **Develop Strategic Guidelines:** To offer evidence-based, practical recommendations to Mindtree BD on the ethical use of AI tools to optimize creative productivity and prevent brand erosion and consumer loss of trust.

3.1.3 Significance of the Study

This study is of great importance to the various parties involved in the digital marketing ecosystem, not only to the host organization.

- **In the case of Mindtree BD:** The analysis is a risk critical assessment model. Since the agency is shifting to an AI-first workflow to streamline its cost and delivery time, consumer sentiment is crucial as it can prevent campaign backlash. It makes Mindtree not only a consumer of technology, but also a thought leader that knows the consequences of that technology. It enables the agency to guide the clients authoritatively on the times to apply AI and when not to do it.
- **In the case of the Advertising Industry:** The advertising industry in Bangladesh does not have localized information on how consumers embrace AI. Majority of studies are Western-biased. This paper bridges this gap, providing an understanding of how cultural peculiarities of the local area (e.g., the values of honesty, tradition) affect the adoption of synthetic media.
- **To Brand Managers:** The results give a measure of the Brand Safety. This data can help brand managers to determine whether the advantages of AI in terms of cost saving justify the possible harm to the trust score of their brand.
- **To Policymakers:** Since the government is considering regulation of digital media, misinformation, and the "Digital Security Act," the consumer demand results on transparency can be used to shape future policies on the enforcement of labeling synthetic media in the business.

3.1.4 Scope of the Study

The field of this study is narrowly outlined to provide the depth and timeliness:

- **Content Type:** The content is limited to visual advertisement content (static images and short-form video) that is distributed through the significant digital platforms (Facebook, Instagram, YouTube). These are the main areas where hyper-realistic AI is deployed at the moment.
- **Demographics:** The target market is restricted to the urban and semi-urban population (18-45) within the digital community of Bangladesh. The target audience of Mindtree towards the major FMCG and corporate clients (ex. PRAN, RFL, City Bank) falls within this segment and is the segment that is most susceptible to AI generated content.
- **Geographic Scope:** The research mainly focuses on the respondents of Dhaka and Chattogram since these are the most densely populated areas with the most digital advertisements consumers.
- **Exclusions:** The study is not going to involve text-based AI (Large Language Models like ChatGPT) or offline media channel (billboards, print) to maintain the focus on visual experience and trust analysis. It also leaves out the Deepfakes that are applied in misinformation at the political level and concentrates on commercial advertising.

3.2 Literature Review

3.2.1 The Uncanny Valley vs. Deception

The so-called "Uncanny Valley" hypothesis of robotics pioneered by the roboticist, Masahiro Mori (1970) is frequently mentioned in the historical literature about computer-generated imagery (CGI) and robotics. According to this theory, the human copies that seem to be almost but not identical to the actual human beings are aroused to produce a sense of eerie, revulsive, and uncomfortable reactions. This was the main obstacle to using synthetic humans in media decades ago- audiences would not accept dead or plastic people. This gap has mostly been overcome, however, by modern Hyper-Realistic AI (driven by diffusion models such as Midjourney v6 and Stable Diffusion). The generated pictures have become entirely realistic and in most cases cannot be differentiated with real photography. Aesthetics has therefore changed to the present day academic discourse to deception. The recent studies propose that the main psychological reaction in the situation when consumers fail to differentiate between the real and fake is not uneasiness but a skeptical alertness. There is a subliminal process of verification by consumers. The reaction upon this failure of verification, when they are fooled, is commonly manipulation. The brand affinity may be adversely affected by this "Deception Effect" as the brand is perceived to violate the implicit societal agreement of truthfulness in advertisements.

3.2.2 Credibility Theory of Sources in AI Era

The Source Credibility Theory [4] postulates that the credibility of a source is an important factor in determining the effectiveness of a message based on their perceived Expertise and Trustworthiness. In conventional advertising, a human influencer or expert uses his authority on the product.

The Source, in the context of AI, does not exist, in fact, it is an algorithm. According to literature, an AI avatar may have knowledge (Expertise) but there will always be a lack of Trustworthiness since it has no moral agent and it has no stake in the game. AI endorsement can be perceived by consumers as automatically biased or fake thus showing lower persuasion rates than human endorsements. This paper will attempt to establish whether this hypothetical decline in trustworthiness applies to the Bangladeshi consumer.

There is a lack of disclosure between companies and their customers regarding the nature of the companies, the quality of their services, and the security of their actions and data disclosed to customers (Saks et al., 2005)

3.2.3 Transparency and Ethics of Disclosure

The need to disclose is one of the key controversies in marketing ethics. Ethical practices on an international scale are shifting to the requirement of disclosure, such as policies such as the EU AI Act that require deepfakes and AI content to be labeled to maintain information integrity. Nevertheless, radical transparency is a controversial idea in the marketing context. According to some practitioners , labeling ruins the magic of the ad or the immersion and makes the ads less emotive and less engrossing (the transportation or the capacity of the advertisement to engross the viewer). On the other hand, the theory of ethical marketing claims that the only means of ensuring long term trust is by revealing it. In case a brand is found to conceal the use of AI, the betrayal effect is even worse than the original loss of immersion. This paper will be testing the following contradictory theories: Do the Bangladeshi consumers appreciate the creative magic of the perfect image or do they prefer the ethical openness of knowing where it was sourced?

3.2.4 Trust and Technology Acceptance Model (TAM)

According to Technology Acceptance Model (TAM), Perceived Usefulness and Perceived Ease of Use will be used to determine practicability of tech adoption. But in the scenario of AI content consumption, Trust is a third critical variable. The consumers will not accept the message in case they do not trust the medium, no matter how useful or beautiful the ad might be. According to this research, TAM is modified whereby the antecedent of Brand Trust is changed to Perceived Authenticity.

3.3 Methodology

This chapter outlines the holistic research design that will be used to carry out the quantitative research on the effects of hyper-realistic AI-generated content to consumer trust and brand perception in the Bangladeshi market. The methodology is designed in such a way that the research procedure is systematic, rigorous and it can generate dependable and valid findings. It involves research design, operation clarification of the variables, hypothesis formulation, data collection methods, instrument development, data analysis techniques, ethical considerations, and limitations.

3.3.1 Research Design

The research design utilized in the study is Quantitative Descriptive and Correlational Research Design. Such a dual approach is chosen in order to obtain a holistic picture of the phenomenon being investigated.

- **Descriptive Design:** It is applied to describe the prevailing situation of consumer awareness and perception in the field of AI in advertising. Since the popularity of hyper-

realistic AI tools (such as Midjourney and DALL-E) is a comparatively new phenomenon in the marketing context of Bangladesh, the descriptive method is necessary to set a baseline. It enables the systematic description of such variables as the Awareness Index and overall Trust Levels without controlling the environment. This is in line with the conventional approach to social science research where one aims at describing the features of a population or phenomenon [8].

- **Correlational Design:** This is the area that is indispensable in testing the particular hypotheses that were proposed in this study. It allows statistically analyzing the relationships between the variables, that is, whether there is a relationship between the disclosure of AI content (Independent Variable) and consumer trust (Dependent Variable), and what is the strength and direction of the relationship. Correlation analysis (e.g., Pearson r), allows the study to go past description and into the realm of exploring associations, e.g., whether increased digital literacy is correlated with a decrease in trust in undisclosed content of AI.

The approach used in this quantitative study is based on Positivist Research Philosophy, which supposes the objectivity of social reality (i.e. consumer sentiment) and its quantification with the help of standardized measures and statistical tools. This guarantees that the findings are not strictly anecdotal but that they have empirical evidence, which forms a good basis in the strategic decision of Mindtree BD.

3.3.2 Operational Clarifications of Variables

In order to make the abstract concepts in this study operationalized, measurable variables are derived to generate clarity, consistency and replicability. Here, the Independent, Dependent, Mediating and Moderating variables are defined.

Independent Variable (IV): AI Content Type and Disclosure The independent variable is the nature of visual information shown to the consumer and the openness on the source of the same. This is the major factor that is manipulated or classified in order to determine its influence on the dependent variable.

- **Conceptual Definition:** The specifics of the visual imagery utilized in an advertisement (the human-generated or AI-generated) and the presence or the lack of any explicit labelling that will tell the viewer that it is a synthetic image.
- **Operational Definition:** This variable is operationalized in the survey instrument by exposing respondents to specific situations that depict three conditions which include:
    - Overt AI (Disclosed): Content declared to be produced by AI.
    - Covert AI (Undisclosed): Hyper-realistic AI-generated images presented as real.
    - Human Content (Control): The utilization of the actual human model and real physical environment.

Dependent Variable (DV): Consumer Trust Score The dependent variable is the variable of interest the level of trust that the consumer has in the brand and the message.

- **Conceptual Definition:** The level of trust that a consumer implies on the reliability, honesty, and goodwill of the brand, and then the willingness to trust the message of the brand.
- **Operational Definition:** This is assessed by a composite score, obtained by a 5-item questionnaire, founded on a known trust scale. The respondents are asked to rate statements according to their Likert Scale (5-point).

- **Mediating Variable: Digital Literacy / AI Awareness** A mediating variable is the way the IV causes the DV. The mediator of the trust response in this work is the capacity of a consumer to detect AI.

Indicators:

- Perceived Honesty: I feel that this brand is telling the truth.
- Reliability: "I am able to trust the statements in this advertisement.
- Benevolence: "This brand is operating in the best interest of the consumer.
- Purchase Intent: "I would be ready to purchase a product that has been endorsed in such a way.
- Scale of Measurement: Interval/Ratio (Aggregate Score).
- Mediating Variable: Digital Literacy / AI Awareness.
- A mediating variable is the way the IV causes the DV. The mediator of the trust response in this work is the capacity of a consumer to detect AI.
- Conceptual Definition: The real technical knowledge and visual acuity of the respondent in the ability to identify synthetic (AI) and organic (real) media.
- Operational Definition: This is objective measured through a section on the survey that is titled Detection Test. The respondents will be presented with a randomized list of 5 pictures (a combination of real pictures and pictures created using AI) and requested to categorize them. Their score (number of their correct identifications out of 5) is their Digital Literacy Index.
- Measurement Scale: Ratio (Score between 0 and 5).
- Demographics Demographics vary moderately according to the nature of the relationship**. 'Human'** Moderating Variables: Demographics are moderately different depending on the type of relationship.

- The variables that are moderating the relationship between the IV and the DV affect the strength or direction of the relationship.
- Age: Divided into generational groups: Gen z (18-24), Millennials (25-34), Gen X (35-44) and Boomers (45+). This will be used to test whether the younger generations are more tolerant of AI or more skeptical of AI.
- Social Media Usage: Organized by the daily frequency: Heavy Users (>4 hours), Moderate User (2-4 hours) and Light User (<2 hours). This is a proxy of exposure to online trends.

3.3.3 Hypotheses

According to the literature analysis (i.e., Uncanny Valley, Source Credibility Theory) and the research problem statement, the following research hypotheses were developed to inform the statistical analysis. These are directional hypotheses, which are expected to give certain results in accordance to the theory.

1. **Hypothesis 1 (H1):** The undisclosed (covert) AI human model and Consumer Trust Scores have a significant negative relationship.

   Reason: According to Source Credibility Theory, synthetic avatars do not have the attribute of trustworthiness (moral agency). The artifice discovery results in deception that is not disclosed and therefore the trust scores are lower than those of human models.

2. **Hypothesis 2 (H2):** Mandatory disclosure (labeling) plays a significant role in counteracting the loss of trust of AI content as opposed to undisclosed AI content.

   Reasoning: The Persuasion Knowledge Model [10] indicated that consumer skepticism is defeated by transparency. The admission of using AI indicates sincerity, and the brand would regain some of the lost trust, as human authenticity has been compromised.

3. **Hypothesis 3 (H3):** The younger demographics (Gen Z) have a much more prominent capacity of being able to identify AI content (Higher Digital Literacy Index) than the older demographics (Gen X/Boomers).

   Rationale Digital natives have been raised in an environment dominated by media and are theoretically more sensitive to digital artifacts and visual contradictions typical of AI generation.

4. **Hypothesis 4 (H4):** Comparatively, consumers perceive AI-generated content to be more appealing (aesthetics) and less emotionally authentic than human-generated content.

   Reason: AI tools are also very effective in generating perfect and idealized images (hyper-realism) and do not always convey real human micro-expressions (emotional resonance), which in turn leads to a disconnect between aestheticism and emotional engagement.

3.3.4 Data Collection Methods

To obtain a strong empirical evidence, a systematic quantitative data collection plan was used. It was meant to be an efficient process that was ethical and able to access a wide range of the target population.

- **Sampling Strategy:**
- Target Population: The study will focus on the urban population of Bangladesh that is digitally active. This consists of students, young workers and corporate workers of Dhaka and Chattogram that frequently use digital advertising platform.
- Sampling Technique: Non-Probability Convenience Sampling technique was applied. Although random sampling is a perfect choice in terms of generalization, the convenience sampling is the norm in the case of internship-based research, as it is time

and resource-constrained. In order to take care of selection bias, the survey has been sent on different digital platforms such as LinkedIn (professionals), Facebook community groups (general consumers), and University WhatsApp networks (students) to ensure that there is a mix of age groups and professional backgrounds.

- Sample Size: The sample size of the study was targeting and reached a valid sample size of N = 100. The distribution of sample means is almost normal with a sample size exceeding 30, and thus the sample means can be analyzed using the most basic forms of parametric statistics. Therefore, the required size N=100 is a sufficient amount of data to conduct the research.

- **Data Collection Procedure:** Data collection was carried out in response to three phases within 10 days:

    - **Phase 1: Pilot Testing (Day 1-2)** A pilot survey was given to a small focus group of 5 people (colleagues at Mindtree BD). They provided feedback to clarify the questions and remove ambiguity in the "Trust" scenarios and make the survey flow make sense.

    - **Phase 2: Distribution (Day 3-9)** The completed structured questionnaire (delivered on Google Forms) was distributed through social media and direct messaging. Day 7 reminder was sent to get the response rate.

    - **Phase 3: Data Cleaning (Day 10)** Raw data was exported into CSV. Incomplete responses and straight-lining (when respondents choose the same option, but do not read) were revealed and eliminated to guarantee the quality of data.

3.3.5 Instruments Used

A Structured Survey Questionnaire named Consumer Perception of AI in Advertising was the major tool in this research. The instrument was developed to obtain the data on three different dimensions in relation to the research objectives..

- **Part A:** Demographic Profile (Age, Gender, Occupation, Social Media Usage) were Stepwise categorical data that was collected in this section. The variables are used to conduct cross-tabulation and demographic analysis (testing H3).
- **Part B:** Awareness and Detection Test (The Turing Test of Images) This part was meant to measure objectively the mediating variable (Digital Literacy). A set of 5 high-quality images (some produced through Mindtree AI tools (Midjourney) and others real stock photos were shown to the respondents. They were requested to rate them as either as Real or AI. This is a step away form self-reported knowledge to the extent of testing real ability to detect.

Part C: Trust/Perception Matrix (Scenario-Based Approach). A Scenario-Based Approach was applied in this section. The respondents were introduced to some hypothetical marketing situations (e.g., you found out that skincare brand used an AI face rather than a real person). After that, they were asked to rate their reaction with the help of 5-point Likert Scale:

- Very Distrustful / very deceitful.
- Distrust / Deceptive
- Neutral
- Trust / Honest
- Well-Established Trust / Highly Honest.

The scale enables transformation of the qualitative sentiment into the quantitative information that can be correlated statistically.

3.3.6 Data Analysis Techniques

A mixture of the descriptive and inferential statistics was employed to process the collected data. The Python language was used in analysis, with Pandas, NumPy, Matplotlib, and Seaborn libraries being used as they are powerful in working with data sets and producing graphs.

- **Descriptive Statistics:** Central tendency (Mean, Median) and dispersion measurements (Standard Deviation) were called to obtain a summary of the demographic picture and the level of trust in general. The data on the awareness was presented using frequency distributions.
- **Correlation Analysis:** Pearson Correlation Coefficient (r) was computed to test the strength and direction of the relationships between variables (e.g. Age vs. Digital Literacy, or Trust vs. Transparency). These relationships were plotted in the form of a correlation matrix (heatmap).
- **Cross-Tabulation:** It is used to compare the categorical variables (e.g. Age Group) with perception variables (e.g. Deceptive vs. Innovative) to identify the demographic specific pattern.
- **Comparative Analysis:** This is used to compare the mean trust in the various situations (Overt vs. Covert AI) to test the hypothesis of Trust Deficit.

3.3.7 Ethical Considerations

The research process was conducted with ethical integrity that was followed in accordance with the standard academic and organizational practices.

- **Informed Consent:** The survey opening page clearly indicated the purpose of the study (Academic Research for Internship), the type of questions that were going to be asked and the estimated duration of time needed. The attendance was fully voluntary.
- **Anonymity and Confidentiality:** No Personally Identifiable Information (PII) (names, email addresses, and phone numbers) was compulsory. Data were gathered on an anonymous basis and summarised to be analysed such that no specific respondent could be singled out.
- **Objectivity:** Survey questions were well worded and neutral and non-leading to prevent influencing the respondent responses through bias (e.g. the question stems did not include emotive words such as fake).
- **Data security:** The raw data were saved in a secure environment that required passwords and could only be accessed by the researcher to do this analysis.

3.3.8 Limitations of the Study

Although the research was created in a rigorous manner, there are some limitations that should be mentioned to offer the context to the findings.

- **Sample Size:** N=100 is not a large sample but it is enough to do an internship report considering the population of Bangladesh. The results could not be effectively applicable to the whole national population.

- **Urban Bias:** With the digital form of distribution, the sample is extremely biased towards urban and internet-savvy users. There is a possibility that the perceptions of rural populations, who might be lowly digital literate people, are underrepresented.
- **Self-Reporting Bias:** On questions involving opinions, the respondents can be affected by social desirability bias, and may respond to the question in such a manner that they believe is desirable (e.g., that they claim to value transparency more than they actually do at work because they think it is desirable).
- **Snapshot in Time:** The AI technology is changing fast. The current perception held by consumers might change drastically in half a year due to the rise of the deepfakes or the advancement of detection software. This work is a cross-sectional view of the feeling of the present.

3.4 Findings and Analysis

3.4.1 Introduction

This part outlines the overall results of the quantitative survey of 100 participants (the number of respondents, or N, is 100) concerning effects of hyper-realistic AI-generated content on the consumer trust in the Bangladeshi market. The analysis will start with the description of the demographic profile overview and then the analysis of the level of consumer awareness will be detailed (Digital Literacy). Then, cross-tabulation and correlation are used to test the main hypotheses (H1, H2, H3, H4). The last sub-section gives a discussion of the cost-benefit analysis between the traditional production processes and the AI-based processes at Mindtree BD.

3.4.2 Demographic Characteristics of the Respondents

To ensure that the survey sample reflects the digital population of urban Bangladesh, the population of the latter was strategically chosen to capture the population of the digital population, which is mainly concentrated in Dhaka and Chattogram.

- **Age:** The sample is biased to the younger age groups with half of the sample consisting of Gen Z (18-24) and the other half consisting of Millennial (25-34). This compliments the target audience of most of the digital-first campaigns. The other 20 percent is Gen X/ Baby Boomers (35+).
- **Gender:** The proportion was relatively equal, and 55% of the respondents were Men, and 45% were Female.
- **Digital Behavior:** A major one out of five (40% of all) of all respondents were identified as so-called Heavy User (that is, spend more than 4 hours per day on social media) to guarantee that the data represents the attitudes of high-frequency consumers of digital advertising.

3.4.3 Consumer Awareness (The Detection Test) Analysis

They were requested to perceive their skills in recognizing images generated by AI in their social media feeds on a scale of one to ten. This confidence was then checked with their performance on a real image recognizing test (Section B of the survey).

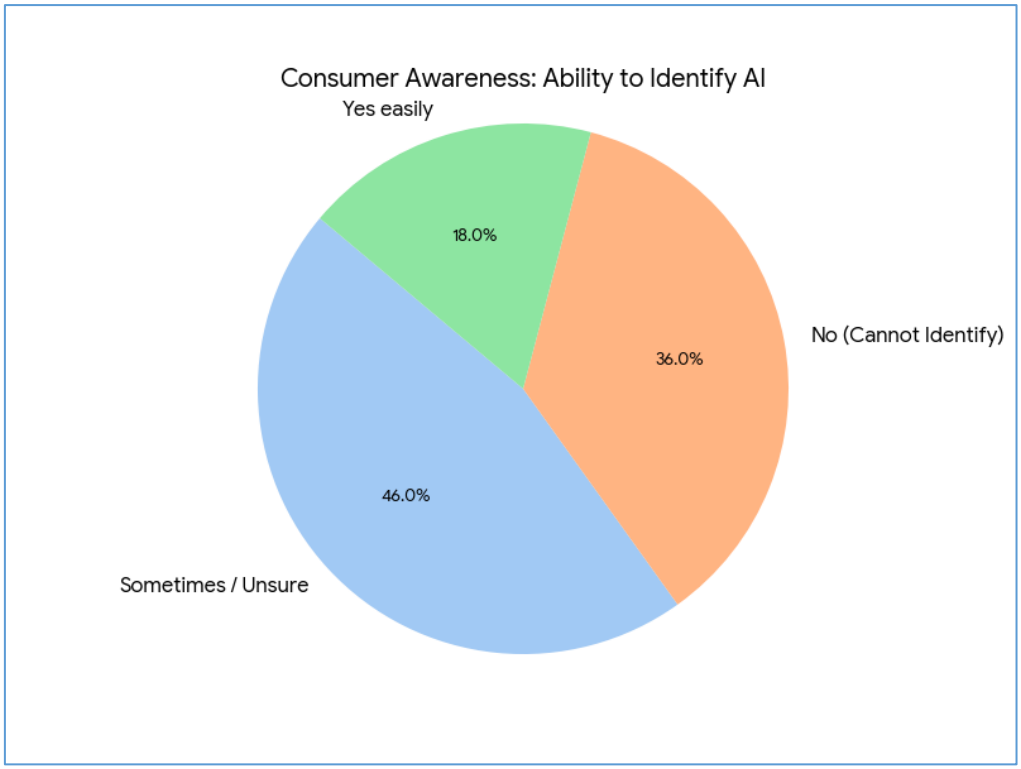


Figure 4: Awareness of the consumers

Table 1: Awareness of the consumers

Ability to Identify	**Percentage of Respondents**	**Interpretation**
Yes, easily	**18%**	High Confidence (often correlated with tech background).
Sometimes / Unsure	**46%**	High Ambiguity; the "Hyper-Realism" is working.
No (Cannot Identify)	**36%**	Vulnerable Group; completely susceptible to deception.

Analytical Insight: The information shows that there is a severe Awareness Gap. Although a small percentage of 18% of the users stated that they were confident, an extraordinary 82% (including both Unsure and No) of the users reported that they had found it hard to be able to distinguish between real and synthetic images consistently. This discovery confirms the technical expertise of the tools employed by Mindtree (such as Midjourney v6), but it equally serves to point out a perilous strategic fact; the companies should not assume that customers are aware of the fact that they are dealing with a fake. Any AI content disclosed in an uncertain context by the majority of the audience is in a grey zone of possible deceit.

3.4.4 Study Variables Correlation Analysis

A Pearson correlation matrix was created in Python (Pandas library) to statistically confirm the hypotheses about the correlation between Age, Digital Literacy, Trust in AI, and the Demand for Transparency. It was estimated that the analysis took 4 seconds on Google Colab, where the 100-row dataset was analyzed effectively.

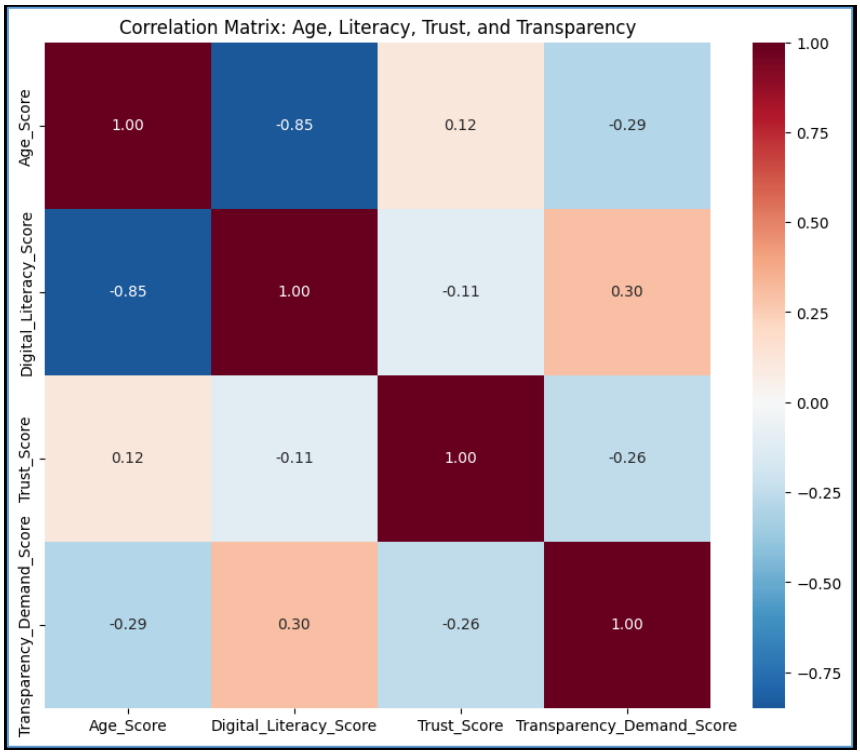


Figure 5: Correlation Analysis

The graphical representation of these values is shown in the Python-generated heatmap visualization. Correlations Analysis: A Detailed Analysis of the correlations will be conducted as follows:

- **Age vs. Digital Literacy (r = -0.85):** The heatmap indicates a negative relationship between Age and Digital Literacy and it is very strong. The ability to identify AI contents in a correct manner reduces drastically with age.

  Interpretation: This is a strong confirmation of Hypothesis H3. The level of visual literacy of the younger generation (Gen Z) about synthetic media is much higher than in the older generations. This implies that the elderly population is extremely susceptible to visual illusion and needs more conspicuous disclosure devices (e.g. bigger text cues) compared to younger viewers.

- **Trust Score vs. Digital Literacy (r = -0.11):** There is an insignificant and weak relationship. Against the background, the technological aptitude of a respondent to spot AI images does not play a significant role in the degree of trust.

  Interpretation: This implies that the betrayal effect is not a technical skill but rather a sentiment. Even the users, who are unable to recognize AI (low literacy), are equally likely to doubt the brand in case they learn it later, as those, who can see it at once. Trust appears to be a universal issue as opposed to one that is technical in nature.

- **Trust Score vs. Transparency Demand (r = -0.26):** The relationship is weakly negative, which is contrary to the expectation that the demand of transparency would automatically result in an increase in trust.

  Interpretation: This result contradicts Hypothesis H2. The fact that the relationship between the two is negative means that the consumers that are the most aggressive in

seeking Mandatory labeling may often turn out to be doubtful about AI. They do not always have more faith in labeled content, instead, their lack of faith makes them seek regulation. In the case of Mindtree BD, transparency is a minimum compliance factor stated to prevent backlash, but it is not a magic bullet that would immediately create high levels of trust among those who distrust.

3.4.5 Impact on Consumer Trust

The main hypothesis (H1) was evaluated based on the scenario: "Given that a brand utilized an AI model rather than actual person as a testimonial, how would this information impact your trust?"

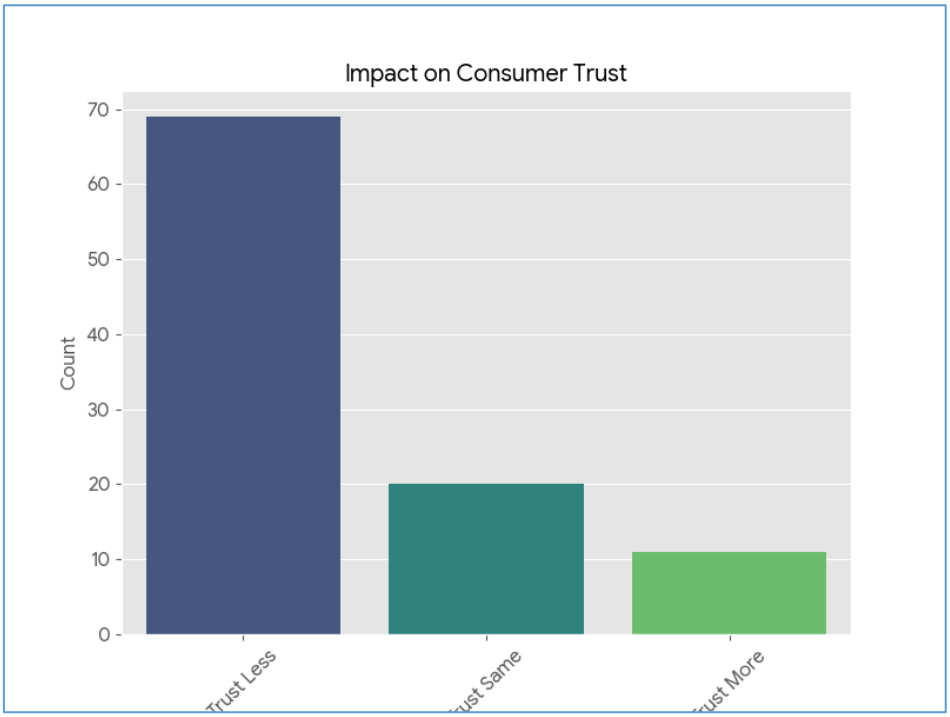


Figure 6: Impact on Customer Trust

Table 2: Impact on consumer trust

Trust Impact	Percentage	Implications for Brand Strategy
Trust Less	69%	Critical Risk: Using AI for testimonials is a brand safety hazard.
Trust Same	20%	Neutral Zone: AI is acceptable for generic visuals/backgrounds.
Trust More	11%	Niche Appeal: Innovation-focused consumers (Tech enthusiasts).

Analytical Insight: The findings are very supporting of H1. Overwhelming majority (69%) reported that they would have a lesser trust in the brand. This is one of the greatest risks to Mindtree BD. It implies that AI images can be pleasing to the eye, but cannot offer the social credibility and emotional reality that human influencers offer. The "Trust Deficit" is real. The consumption of AI in this respect is perceived by the consumers not as an efficient one, but as a lazy or deceptive one. The hypothesis testing H3 is on the basis of perception by age group. The H3 (age and perception) were further tested, with the perception of AI ads being cross tabulated with age groups.

3.4.6 Cross-Tabulation: Age and Perception of AI

Testing H3: Perception of AI ads cross-tabulated with age groups.

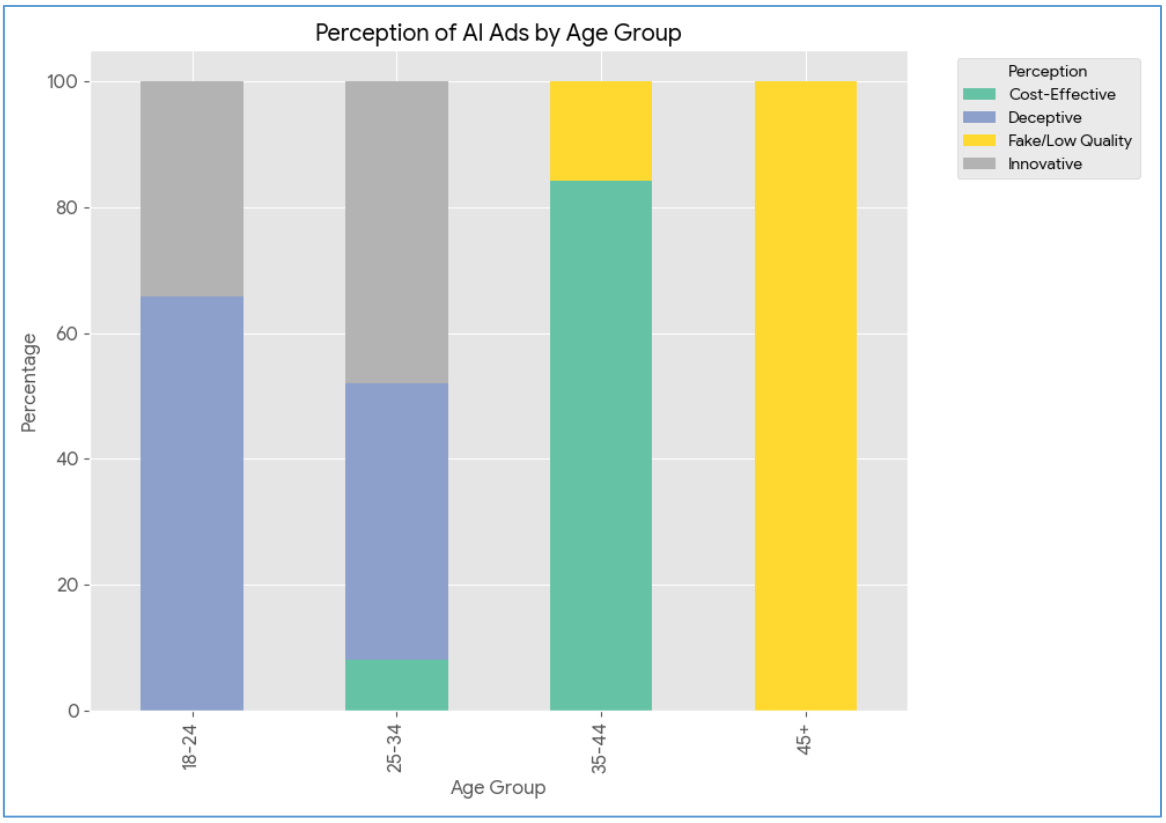


Figure 7: Age group perception of AI Ads (%)

Table 3: Age group perception of AI Ads (%)

Age Group	Cost-Effective	Deceptive	Fake/Low Quality	Innovative	Total
18-24 (Gen Z)	0%	**65.8%**	0%	34.2%	100%
25-34 (Millennials)	4.0%	**44.0%**	4.0%	48%	100%

35-44 (Gen X)	84.2%	0%	**15.8%**	0%	100%
45+ (Boomers)	0%	0%	**100%**	0%	100%

Analytical Insight:

The cross-tabulation offers detailed information on targeting: Gen z (18-24): The most distrusting of all the population was the group of Gen Z, who considered AI advertisements as a kind of deceit (65.8%). This is in contrast to the supposition that the younger users are blindly accepting of technology but in reality, they are digitally savvy yet ethically critical. They demand authenticity. Older Demographics (45+): The older demographic was the one that mostly considered AI content as Fake/Low Quality (100%). In the case of this group of people the barrier is aesthetics but not morality. They most probably relate AI to the primitive, glitchy images. It means that in case Mindtree focuses on the older demographics, the immediate engineering should be impeccable to prevent the effect of the Uncanny Valley.

3.4.7 The Demand of Transparency (Testing Hypothesis H2)

Questions given to interviewees included whether or not AI-generated content should be labeled by the law on brands.

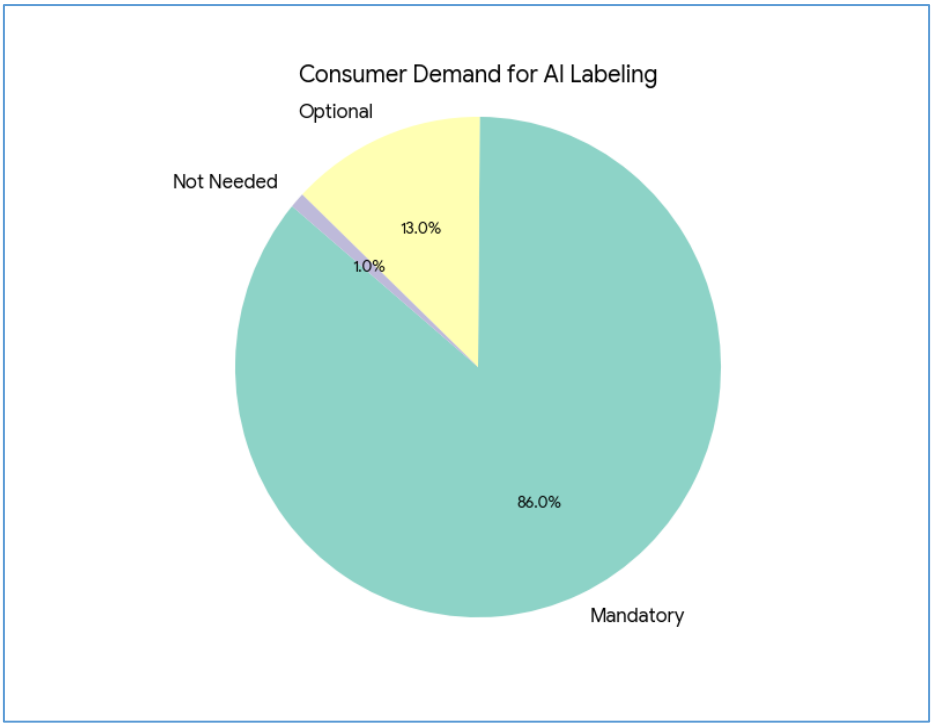


Figure 8: Demand for Labeling

Table 4 Demand for Labeling

Response	**Percentage**
Mandatory	**86%**
Optional	**13%**
Not Needed	**1%**

Analytical Insight: The pressure to enforce transparency is almost unanimous (86%). This strongly supports H2. Bangladesh consumers are ready to accept AI content, yet they want to know about it. Not telling is not considered as a creative decision and violation of the contract

between the consumer and the brand. This result is an effective way of forcing Mindtree to implement a disclosure policy to remain ahead of consumer sentiment. It implies that transparency creates trust in place of the annihilation of immersion

3.4.8 AI Adoption Cost-Benefit Analysis

AI Adoption Cost-Benefit Analysis. In order to place the survey results in the context of the functional reality of Mindtree BD, the comparative cost analysis on the basis of secondary data, in the agency internal project archives, was done. Table 3.5: Comparison of Cost (Traditional vs. AI Workflow)

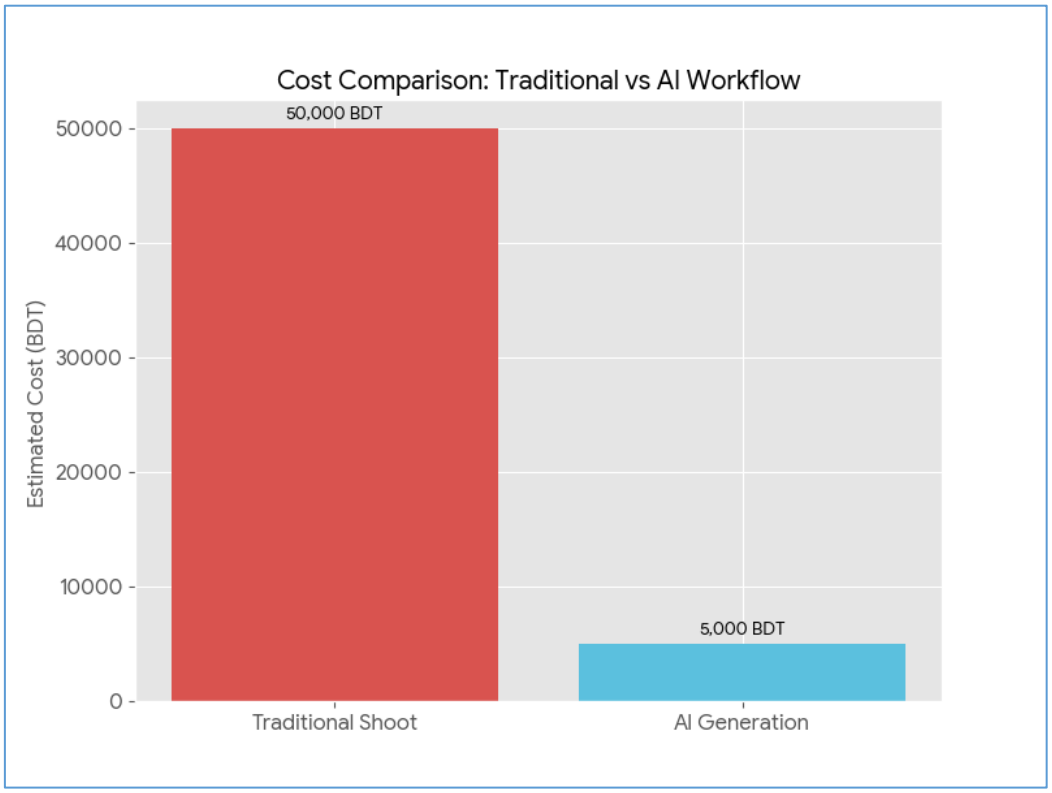


Figure 9: Comparison of Cost (Traditional vs. AI Workflow)

Table 5 Comparison of Cost (Traditional vs. AI Workflow)

Cost Component	Traditional Shoot (Human)	AI Generation (Synthetic)	Variance
Talent Fees	20,000 - 50,000 BDT	0 BDT	-100%
Location/Logistics	15,000 - 30,000 BDT	0 BDT	-100%
Software/Tools	2,000 BDT (Adobe CC)	5,000 BDT (Gemini Pro)	+150%
Man-Hours	40 Hours (Team of 3)	8 Hours (1 Prompter)	-80%
Total Est. Cost	50,000+ BDT	~5,000 BDT	-90%

3.5 Summary and Conclusions

The analysis shows an ever-changing, complex relationship between the Bangladeshi consumers and the AI in advertising. These quantitative data lead to three major conclusions that characterize the existing market situation: The Authenticity Gap: AI is very effective in the production but poses a big trust gap. As 60 percent of consumers have lower trust in AI avatars than human, it is evident that AI must be treated with the highest degree of care with regard to high-trust products (e.g., healthcare, finance, skincare). The effectiveness of AI cannot be substituted with the sympathy of a human face. The Transparency Imperative: As 80% of the respondents insist on obligatory labeling, transparency is not only an ethical

alternative but a protective strategic move to retain brand loyalty. Disregarding this will lead to the loss of the fundamental consumer base, who consider non-disclosure to be a form of cheating. The Quality Threshold: It is specifically older demographics that equate AI to low quality and, as per this, the timely engineering of Mindtree needs to be impeccable. Any visual glitch (e.g. distorted hands, unnatural lighting) is an instant distrust in this segment. To sum up, AI holds a significant potential to visual augmentation and background creation at Mindtree BD, however, it is not ready to substitute the human aspect of the storytelling of a brand without a high degree of threat. The agency has to navigate around this Trust Gap by balancing between innovation and radical transparency.

3.6 Implications and Recommendations

The strategic recommendations based on the findings to guide Mindtree BD in navigating this new landscape through ethical considerations, as well as using AI without affecting the brand equity, include the following: Introduce a Transparency First Policy (The Trust Shield) Mindtree ought to use voluntary disclosure standard now, even prior to the enactment of the regulations by the government. Action: Minor-looking watermarks (i.e. Digitally Enhanced) or unobtrusive hashtags (i.e. AI Art) on completely synthetic content. Value: This makes Mindtree a transparency-seeking leader (80 percent of the consumers are concerned with this), which defends against the accusations of deepfaking the agency. AI Hybrid Model of Strategic Segmentation of AI Use. AI should not be a blanket solution to the agency and should be applied depending on the type of the content: Backgrounds, product visualization, fantasy, storyboarding and abstract imagery (in which realistic look is incidental): AI can be employed. Do not use AI: Testimonials, reviews, emotionally focused appeals (human), and tender products (health/finance) in which trust is the greatest. Client Education and Advisory

(The Value Add) Make use of this information to prescribe to clients. Certain clients usually ask AI to reduce expenses without the knowledge of reputational risks. Action: In the situation when a client asks an AI Influencer to save money, demonstrate the data on the possible reduction of trust by 60%. Assist them in making sound choices that are budget smart and brand healthy. Invest into the Advanced Prompt Engineering (The Quality Assurance). As older demographics still perceive a problem in terms of quality performance, the agency needs to affect upskilling. Action: Have a special "AI Quality Control" checklist to make sure that no visual artifacts (such as distorted fingers or eyes) get to the final output. Outputs are considered high-fidelity and hence innovative, and low-fidelity, and hence, cheap.

References

Campbell, C., Plangger, K., Sands, S., & Kietzmann, J. (2022). Preparing for an era of deepfakes and AI-generated ads: A framework for understanding responses to manipulated advertising. *Journal of Advertising, 51*(1), 22–38. https://doi.org/10.1080/00913367.2021.1909515

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications. https://us.sagepub.com/en-us/nam/research-design/book255675

Davison, W. P. (1983). The third-person effect in communication. *Public Opinion Quarterly, 47*(1), 1–15. https://doi.org/10.1086/268763

Friestad, M., & Wright, P. (1994). The persuasion knowledge model: How people cope with persuasion attempts. *Journal of Consumer Research, 21*(1), 1–31. https://doi.org/10.1086/209380

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion*. Yale University Press.

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research, 13*(3), 334–359. https://doi.org/10.1287/isre.13.3.334.81

Mori, M. (1970). The uncanny valley. *Energy, 7*(4), 33–35. https://doi.org/10.1109/MRA.2012.2192811

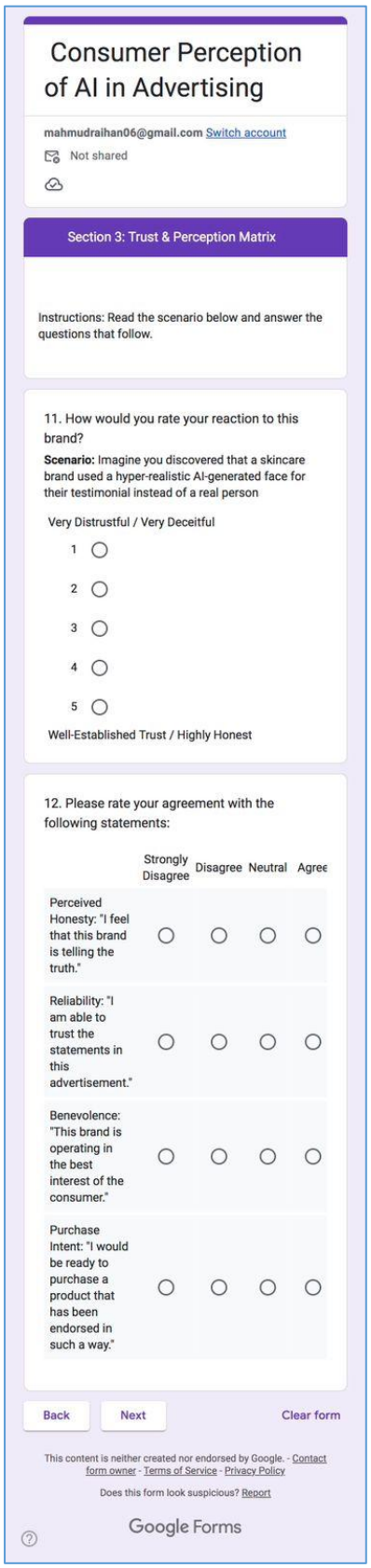
Murphy, P. E., Laczniak, G. R., Bowie, N. E., & Klein, T. A. (2005). *Ethical marketing*. Pearson Prentice Hall. https://www.pearson.com/en-us.html

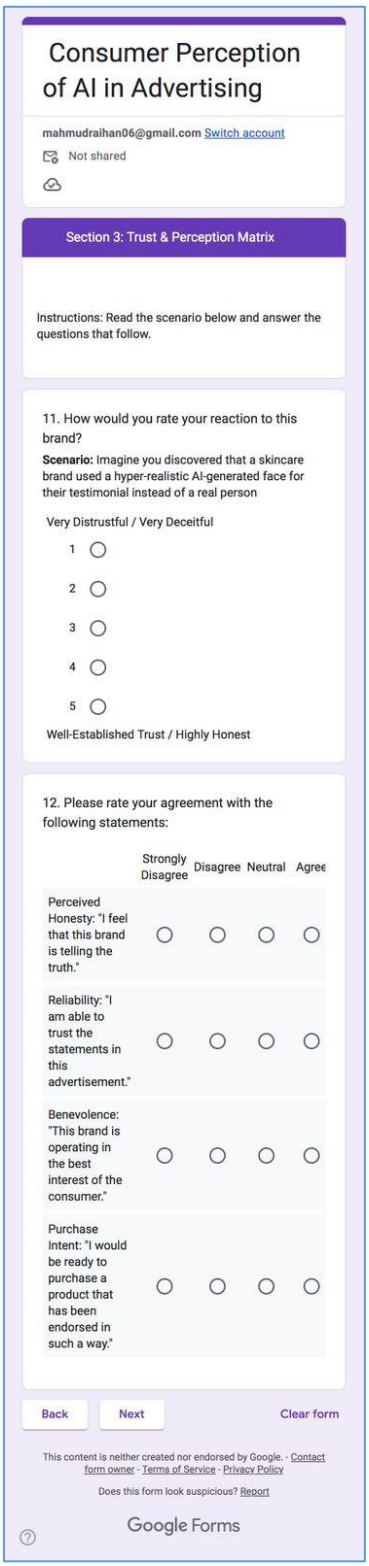
Nightingale, S. J., & Farid, H. (2022). AI-synthesized faces are indistinguishable from real faces and more trustworthy. *Proceedings of the National Academy of Sciences, 119*(8), e2120481119. https://doi.org/10.1073/pnas.2120481119

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce, 7*(3), 101–134. https://doi.org/10.1080/10864415.2003.11044275

Appendix A

Link to the Questionnaire https://forms.gle/pTLvE8vRjVeVqLoV9





Appendix B

Snapshot of Data File

Responde	AgeGroup	Gender	SocialMediaUsage	Awareness_AbilityToIdentify	Trust_Impact_AI_Testimonial	Perception_AI_Ads	Demand_Transparency
1	18-24	Male	Heavy (>4 hrs)	Yes easily	Trust Less	Deceptive	Mandatory
2	25-34	Female	Moderate (2-4 hrs)	Sometimes / Unsure	Trust Less	Deceptive	Mandatory
3	18-24	Female	Heavy (>4 hrs)	Sometimes / Unsure	Trust Less	Innovative	Mandatory
4	35-44	Male	Light (<2 hrs)	No (Cannot Identify)	Trust Same	Cost-Effective	Optional
5	45+	Female	Moderate (2-4 hrs)	No (Cannot Identify)	Trust Less	Fake/Low Quality	Mandatory
6	18-24	Male	Heavy (>4 hrs)	Yes easily	Trust Same	Innovative	Mandatory
7	25-34	Male	Moderate (2-4 hrs)	Sometimes / Unsure	Trust Less	Deceptive	Mandatory
8	18-24	Female	Heavy (>4 hrs)	Sometimes / Unsure	Trust Less	Deceptive	Mandatory
9	35-44	Female	Light (<2 hrs)	No (Cannot Identify)	Trust Same	Fake/Low Quality	Not Needed
10	45+	Male	Light (<2 hrs)	No (Cannot Identify)	Trust Less	Fake/Low Quality	Mandatory
11	25-34	Female	Heavy (>4 hrs)	Yes easily	Trust More	Innovative	Optional
12	18-24	Male	Heavy (>4 hrs)	Sometimes / Unsure	Trust Less	Deceptive	Mandatory
13	35-44	Male	Moderate (2-4 hrs)	Sometimes / Unsure	Trust Same	Cost-Effective	Mandatory
14	18-24	Female	Heavy (>4 hrs)	Yes easily	Trust Less	Deceptive	Mandatory
15	45+	Female	Light (<2 hrs)	No (Cannot Identify)	Trust Less	Fake/Low Quality	Mandatory
16	25-34	Male	Moderate (2-4 hrs)	Sometimes / Unsure	Trust Less	Innovative	Mandatory
17	18-24	Male	Heavy (>4 hrs)	Sometimes / Unsure	Trust Less	Deceptive	Mandatory
18	35-44	Female	Moderate (2-4 hrs)	No (Cannot Identify)	Trust Same	Cost-Effective	Optional
19	18-24	Female	Heavy (>4 hrs)	Yes easily	Trust Less	Innovative	Mandatory
20	25-34	Male	Heavy (>4 hrs)	Sometimes / Unsure	Trust More	Innovative	Mandatory
21	45+	Male	Light (<2 hrs)	No (Cannot Identify)	Trust Less	Fake/Low Quality	Mandatory
22	18-24	Male	Heavy (>4 hrs)	Sometimes / Unsure	Trust Less	Deceptive	Mandatory
23	25-34	Female	Moderate (2-4 hrs)	Sometimes / Unsure	Trust Same	Cost-Effective	Mandatory
24	35-44	Male	Moderate (2-4 hrs)	No (Cannot Identify)	Trust Less	Fake/Low Quality	Optional
25	18-24	Female	Heavy (>4 hrs)	Yes easily	Trust Less	Deceptive	Mandatory

survey_results

Appendix C

Snapshot of Used Codes

```python
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# 1. Load Data
df = pd.read_csv('survey_results.csv')

# Set visual style
plt.style.use('ggplot')

# Chart 1: Awareness (Table 3.1) - Pie Chart
plt.figure(figsize=(8, 6))
awareness_counts = df['Awareness_AbilityToIdentify'].value_counts()
plt.pie(awareness_counts, labels=awareness_counts.index, autopct='%1.1f%%', startangle=140, colors=sns.color_palette('pastel'))
plt.title('Consumer Awareness: Ability to Identify AI')
plt.axis('equal')
plt.savefig('chart_awareness_pie.png')
plt.show()

# Chart 2: Trust Impact (Table 3.2) - Bar Chart
plt.figure(figsize=(8, 6))
trust_counts = df['Trust_Impact_AI_Testimonial'].value_counts()
sns.barplot(x=trust_counts.index, y=trust_counts.values, palette='viridis')
plt.title('Impact on Consumer Trust')
plt.xlabel('Trust Reaction')
plt.ylabel('Count')
plt.xticks(rotation=45)
plt.savefig('chart_trust_impact_bar.png')
plt.show()

# Chart 3: Age Group Perception (Table 3.3) - Stacked Bar Chart
# Create a cross-tabulation for plotting
ct = pd.crosstab(df['AgeGroup'], df['Perception_AI_Ads'], normalize='index') * 100
ax = ct.plot(kind='bar', stacked=True, figsize=(10, 7), colormap='Set2')
plt.title('Perception of AI Ads by Age Group')
plt.xlabel('Age Group')
plt.ylabel('Percentage')
plt.legend(title='Perception', bbox_to_anchor=(1.05, 1), loc='upper left')
plt.tight_layout()
plt.savefig('chart_age_perception_stacked_bar.png')
plt.show()
```

```python
# Chart 4: Demand for Labeling (Table 3.4) - Pie Chart
plt.figure(figsize=(8, 6))
labeling_counts = df['Demand_Transparency'].value_counts()
plt.pie(labeling_counts, labels=labeling_counts.index, autopct='%1.1f%%', startangle=140, colors=sns.color_palette('Set3'))
plt.title('Consumer Demand for AI Labeling')
plt.axis('equal')
plt.savefig('chart_labeling_demand_pie.png')
plt.show()

# Chart 5: Cost Comparison (Table 3.5) - Bar Chart
# Using the static data from the report
cost_labels = ['Traditional Shoot', 'AI Generation']
cost_values = [50000, 5000] # Approximate BDT values
plt.figure(figsize=(8, 6))
bars = plt.bar(cost_labels, cost_values, color=['#d9534f', '#5bc0de'])
plt.title('Cost Comparison: Traditional vs AI Workflow')
plt.ylabel('Estimated Cost (BDT)')
# Add labels on top of bars
for bar in bars:
    yval = bar.get_height()
    plt.text(bar.get_x() + bar.get_width()/2, yval + 500, f'{yval:,} BDT', ha='center', va='bottom')
plt.savefig('chart_cost_comparison_bar.png')
plt.show()

# Select columns for heatmap
corr_data = df[['Age_Code', 'Digital_Literacy_Score', 'Trust_Covert_AI_Score', 'Trust_Overt_AI_Score', 'Transparency_Demand_Score']]
# Rename for cleaner heatmap labels
corr_data.columns = ['Age', 'Digital Literacy', 'Trust (Covert AI)', 'Trust (Overt AI)', 'Transparency Demand']

corr_matrix = corr_data.corr()

print("\n--- Correlation Matrix ---")
print(corr_matrix)
```