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AI in Consumer Decision Making: A Study on Impact of AI on Cosmetic Products

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ABSTRACT

Artificial Intelligence (AI) has emerged as a game-changer in the global beauty and cosmetics industry, revolutionizing traditional approaches to discovering products, selecting options, and engaging with consumers. The growing demand for personalized experiences, convenience, and interactive engagement has positioned AI-driven technologies—such as intelligent chatbots, real-time skin assessments, virtual try-on solutions, and product configurators—at the forefront of consumer buying choices. This exploratory study investigates the role of AI in the usage of cosmetic products, with particular objectives to assess consumer awareness of AI based sentiment analysis and evaluate the challenges associated with virtual try-on technologies in accurately simulating product trials. A purposive sample consisting of 100 female respondents, who actively utilize AI-driven cosmetic products, was gathered through both primary and secondary data sources. Significant insights from earlier studies underscore the potential of AI to enhance personalization, increase purchase intent, and boost consumer satisfaction while also highlighting challenges related to technological limitations, biases, cost considerations, and ethical concerns. This current research contributes to the understanding of how AI facilitates mass customization and influences consumer behaviour in the cosmetics sector, while also acknowledging critical barriers that require strategic and regulatory actions to ensure sustainable implementation. This study examines how Artificial Intelligence (AI) influences the decision-making process of consumers in the cosmetics industry, emphasizing sentiment analysis and virtual try-on technologies. In summary, AI is demonstrating substantial potential for enhancing personalization and engagement, despite challenges related to awareness, trust, and the realism of simulations.

KEYWORDS: Beauty sector, personalized solutions through AI, smart chatbots, immediate skin evaluations, virtual fitting tools, AI-enhanced product customizers, emotion analysis, tailored experiences, engaging interactions, consumer choice processes.

I. INTRODUCTION ON ARTIFICIAL INTELLIGENCE (AI)

Artificial intelligence (AI) has become one of the most disruptive forces in the quickly changing digital economy, changing how companies engage with their customers in a variety of industries. The beauty and cosmetics industry has witnessed some of the most inventive and consumer-facing uses of AI among these sectors, drastically changing conventional methods of product selection, discovery, and acquisition. The increasing need for ease, customisation, and interactive engagement—especially among tech-savvy and digitally engaged consumers— is driving this change. Consumers of beauty products today are active players in the purchasing process, looking for experiences that are customized to their individual

requirements, identities, and aesthetic choices rather than being passive recipients of marketing messages. With the use of tools like intelligent chatbots, real-time skin analysis, virtual try-on applications, and automated, data driven product suggestions, artificial intelligence (AI) technologies allow firms to meet these expectations. Skin tone, texture, facial traits, past purchases, product evaluations, and even social media behaviour are just a few of the data factors that these systems gather and analyse. A more individualized, user-friendly, entertaining, and accessible purchasing experience is the end result. The global cosmetics market, which was estimated to be worth $472.8 billion in 2022, has grown quickly due to elements like lifestyle appeal, brand identity, and rising customer demand for individualized experiences. Artificial intelligence (AI) technologies—in particular, AI based product configurators—have become important facilitators of mass customization in the cosmetics industry in response to this trend. These tools change how beauty goods are sold and chosen by enabling customers to choose items based on their unique needs, preferences, and skin types**.**

II. OBJECTIVES OF THE STUDY

1. To study the role of AI in consumer decision making in cosmetic product.
2. To assess the awareness of AI-driven sentiment analysis among cosmetic consumers
3. To assess the challenges of AI based virtual try-on technology in providing realistic cosmetic product simulation.

III. METHODOLOGY OF THE STUDY

1. **NATURE OF RESEARCH –** The research is exploratory in nature. Exploratory research is a type of research conducted to investigate a topic or problem that has not been well studied or is not fully understood.
2. **SAMPLE TECHNIQUE –** The sampling technique used in the research is purposive sampling
3. **SAMPLE SIZE –** The sample size consists of 100 respondents
4. **SOURCES OF DATA** – Both primary and secondary sources of data were used for the research. Primary data: primary data was collected from the females of who are using AI cosmetics products.

IV. LITERATURE REVIEW

- **Silva et al. (2013):** This review examines both extrinsic and intrinsic aging variables, classifying anti-aging treatments into invasive, non-invasive, and preventative categories while highlighting the effectiveness of each and the debates around it.
- **Jana & K. (2018):** Using the S-O-R model, this study reveals that while pricing is still a barrier, AR and AI beauty technology greatly improve user experience, satisfaction, and buy intent.
- **Haque et al. (2018):** Using SEM analysis, this study demonstrates that among Malaysian Muslims, the intention to purchase halal cosmetics is driven by attitude, perceived behavioral control, and religion, with subjective norm having no bearing.
- **Potluri et al. (2018):** According to an analysis of post-COVID developments, AI and AR are changing the beauty business through improved customisation, cleanliness, and virtual try-ons, and further expansion is anticipated.
- **Davenport et al. (2019):** This study offers a framework for understanding AI's function in marketing, highlighting how it affects business models, customer targeting, and moral issues, including bias and data privacy.

- **Zbib et al. (2020):** This study provides strategic insights for global businesses by revealing that Lebanese consumers' perceptions of cosmetics are influenced by their country of origin, with French products being viewed more favorably than Chinese ones.
- **Salsky (2020):** Personalization using AI and AR in beauty technology increases sales and consumer engagement, but adoption is difficult for smaller firms because of financial and technological constraints.
- **Sihaloho (2020):** According to this quantitative study, social media addiction and perceived utility have a good impact on the use of AI color cosmetics, which in turn greatly boosts consumer behavior.
- **Martinez & Fernandez (2020):** In order to address ethical issues with AI-driven hiring, the study suggests a rule-based auditing system that would reduce bias and improve equity in HR procedures.
- **Vrublevskaia (2021):** This study compares Netflix and Sephora and shows that AI is helpful in marketing personalization. However, consumer knowledge of AI usage is still low, indicating that more education is needed.
- **Martorell and colleagues (2021**): While warning against data limits and validation issues, this dermatologist-led analysis emphasizes AI's revolutionary promise in dermatological diagnoses and therapy, particularly in skin cancer.
- **According to Oosthuizen (2021)**, artificial intelligence (AI) transforms the retail value chain by improving consumer experience and decision-making; yet, organizational, technological, and human resource constraints impede implementation.
- **Vongurai (2021):** In Thai online cosmetics buying, found that while presence has no effect, media richness and narrative experience greatly increase the experiential value of AR try-on features.
- **Georgievskaya et al. (2023):** In their study, they highlight the necessity for regulatory frameworks and bias reduction throughout the AI lifespan. They also identify systemic AI biases in cosmetic skincare, namely, favoring lighter skin tones.
- **Netscher and associates (2023):** Although problems with interpretation still exist across age groups, younger consumers are more likely to embrace AI-based product configurators in cosmetics due to their ease of use and social influence.
- **Liu (2023):** AI-generated demand forecasts in insurance increase sales, but they also promote risk aversion, intensifying adverse selection and jeopardizing long-term market efficiency.
- **Gumus & Onurlubas (2023):** According to the authors, religious beliefs have little bearing on the adoption of halal cosmetics among Turkish Gen Z; instead, product attributes and social considerations are the main drivers.
- **Ooi et al. (2023):** This interdisciplinary review addresses ethical, legal, and employment displacement issues while highlighting the wide range of applications of generative AI in automation and personalization.
- **Jauhar and colleagues (2023):** No-code AI systems provide scalable, affordable, and easily accessible solutions for non-programmers and enterprises after COVID, reducing inventory distortions in supply chains.
- **Hossova et al. (2024):** This theoretical study proposes integrating AI to enhance research scalability and lessen bias, and it promotes the use of the Repertory Grid Technique to assess how digital content is perceived.
- **Loku et al. (2024):** Individual variances shape choices, influencing ethical and usercentered AI design. Consumers prioritize performance yet value sustainability and transparency in AI assistants.

- **Garrel & Mayer (2024):** German students place a high value on scientific rigor, source trustworthiness, and transparency in educational AI technologies, indicating that these attributes are essential for the adoption of AI in academia.
- **Malik et al. (2024):** AI improves cost-effectiveness, safety, and efficiency in a variety of industries, particularly after COVID, but it encounters regulatory and global scaling challenges.
- **Ibeabuchi et al. (2024):** Halal certification, health consciousness, and social influence all have a beneficial impact on non-Muslim Malaysians' intention to buy halal cosmetics, with attitude acting as a significant mediating factor.

V. DATA ANALYSIS

Table 1: Demographic Information of Respondents

Demographic variables	Categories	Responses (in nos.)	Responses (in %)
Age (in yrs.)	18-24	49	49
	25-34	39	39
	35-44	7	7
	45-54	4	4
	55 and Above	1	1
Gender	Male	36	66
	Female	64	64
Level of Education	Class 10 or Below	28	28
	Class 12	6	6
	Graduation	26	26
	Post Graduation	37	37
	Others	3	3
Employment Status	Employed full time	15	15
	Employed part time	8	8
	Self employed	18	18
	Student	35	35
	Unemployed	24	24

Source: Field study

Interpretation: From table number 1 it can be interpreted that –

Age: The majority of respondents are in the age group of (18-24) years with the percentage of 49%, 39% of the majority of respondent are of the age group of (25-34) years 7% of respondents are of the age group of 35-44, 4%of respondents are of the age group of 45-54 and the most less of respondents are of the age group of 55 and above.

Gender: The data shows that 36% of respondents are male and 64% of respondents are female.

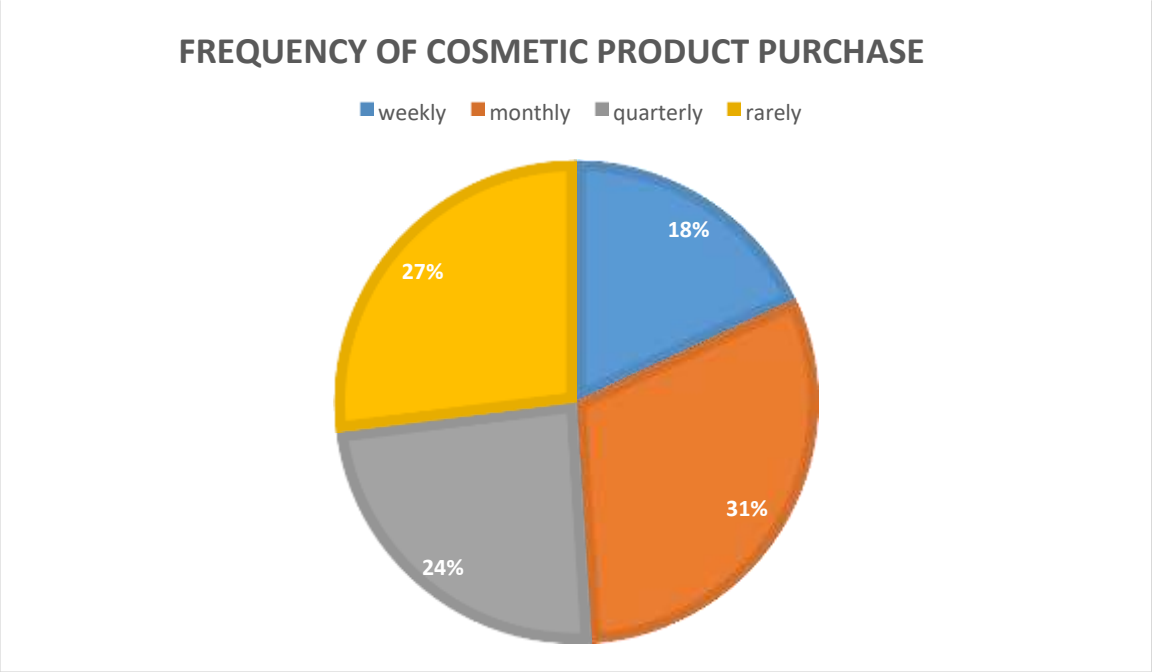
Education level: It is seen that 28% had responded Class 10 or Below, 6% of respondents have attended Class 12, 26% of the respondents chose Graduation, 37% of respondents chose Post graduation, and 3% hold other qualification.

Employment status: It is seen that 15% of respondents are full-time employed, 8% are part time employed, 18% of respondents are self-employed, 35% of respondent are students, and 24% of respondents are unemployed.

B: Data Analysis and Interpretation on objectives 1: To study the role of AI in consumer decision making in cosmetic products.

Frequency of cosmetic product purchase	Responses (in nos.)	Responses (in %)
Weekly	18	18
Monthly	31	31
Quarterly	24	24
Rarely	27	27
Total	100	100

Source: Field study



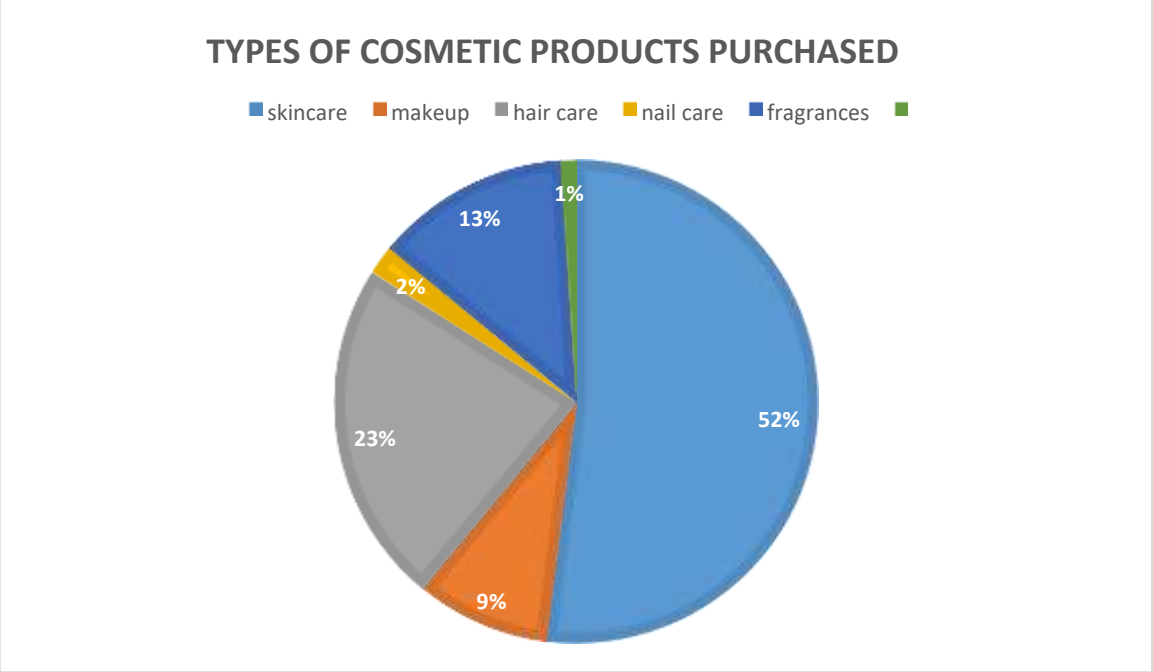
Interpretation: In the above figure, it is seen that 18% of respondents purchase cosmetic products weekly, 31% of respondents purchase cosmetic products on a monthly basis, 24% of respondents purchase cosmetic products quarterly, and 27% of respondents rarely purchase cosmetic products.

Table 3: Table showing types of Cosmetic products typically purchased.

Types of cosmetic products purchased	Responses (in nos.)	Responses (in %)
Skin care	52	52
Makeup	9	9
Hair care	23	23
Nail care	2	2
Fragrances	13	13
Others	1	1

Total	100	100

Source: Field study



Interpretation: In the above figure, it is seen that 52% of respondents purchase skin care products, 9% of respondents purchase makeup products, 23% of respondents purchase hair care products, 2% of respondents nail care products, 13% of respondents purchase fragrances and 1% of respondents purchase other products.

Table 4: Table showing the awareness of respondents of the use of AI in cosmetic products or services

Awareness of AI in cosmetic products or services	Responses nos.) (in	Responses (in %)	Male	Female
Yes	68	68	24	44
No	32	32	12	20
Total	100	100		

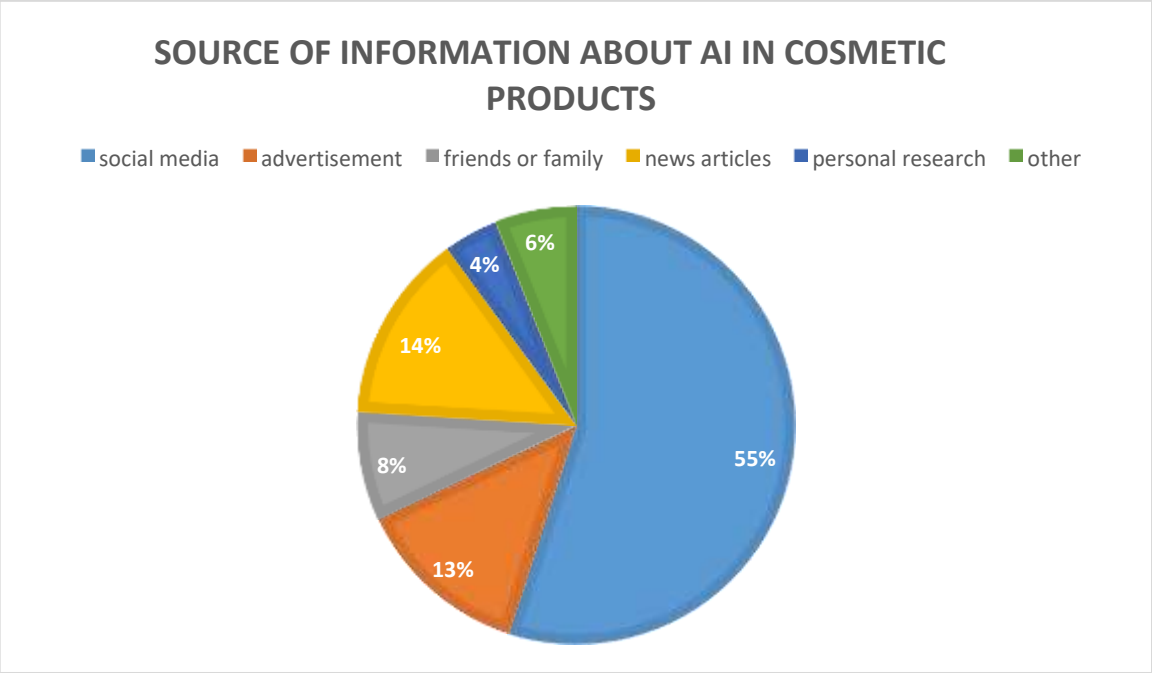
Interpretation: In the above figure, it is seen that 68% of respondents are aware of the use of AI in the cosmetics products or services and 32% of respondents are not aware of the use of AI in the cosmetics products or services.

Table 5: Table showing how respondents first learn about AI in cosmetic products

Source of information about AI in cosmetic products	Responses (in nos.)	Responses (in %)
Social media	55	55
Advertisement	13	13
Friends or family	8	8
News articles	14	14
Personal research	4	4

Other	6	6
Total	100	100

Source: Field study

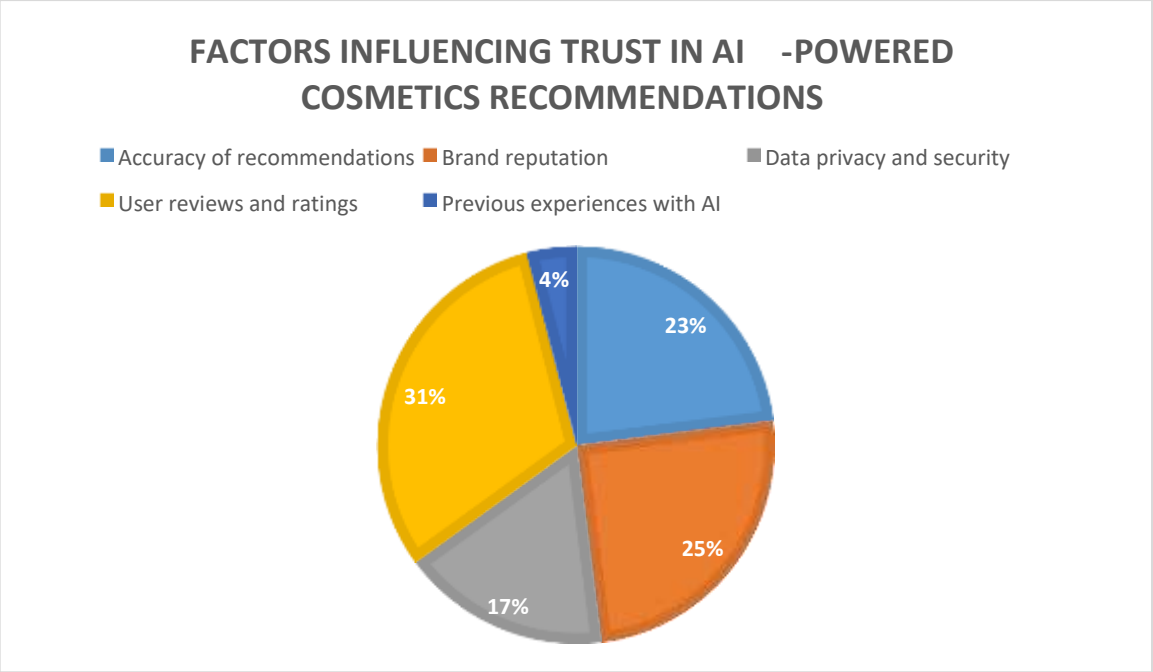


Interpretation: In the above figure, it is seen that 55% of respondents first learned about AI in cosmetic products through social media, 13% of respondents learned about AI in cosmetic products through advertisement, 8% of respondents learned about AI in cosmetic products from friends or family, 14% of respondents learned about AI in cosmetic products through articles, 4% of respondents learned about AI in cosmetic products through their own research and 6% of respondents learned about AI in cosmetic products through other sources.

Table 6: Table showing factors influencing trust in AI-powered cosmetic recommendations

Factors influencing trust in AI-powered cosmetics recommendations	**Responses (in nos.)**	**Responses (in %)**
Accuracy of recommendations	23	23
Brand reputation	25	25
Data privacy and security	17	17
User reviews and ratings	31	31
Previous experiences with AI	4	4
Total	100	100

Source: Field study

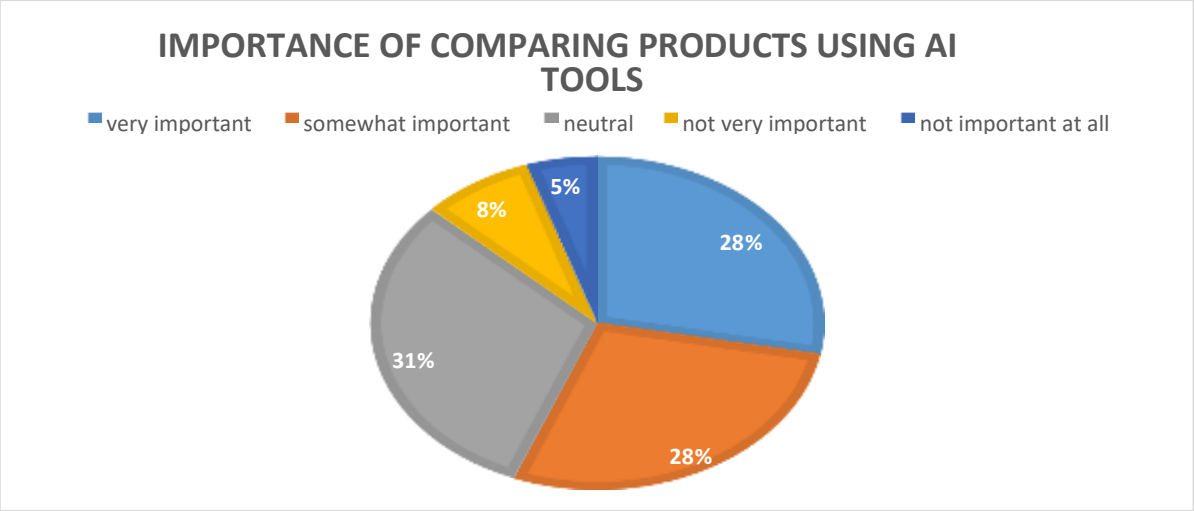


Interpretation: In the above figure, it is seen that 23% of respondents are most influenced by the accuracy of recommendations, 25% of respondents of respondents are influenced by brand reputation, 17% of respondents are influenced by data privacy and security, 31% of respondents are influenced by user reviews and rating and 4% of respondents are influenced by previous experiences with AI.

Table 7: Table showing the importance of comparing different products using AI tools in decision making

Importance of comparing products using AI tools	Responses (in nos.)	Responses (in %)
Very important	28	28
Somewhat important	28	28
Neutral	31	31
Not very important	8	8
Not important at all	5	5
Total	100	100

Source: Field study

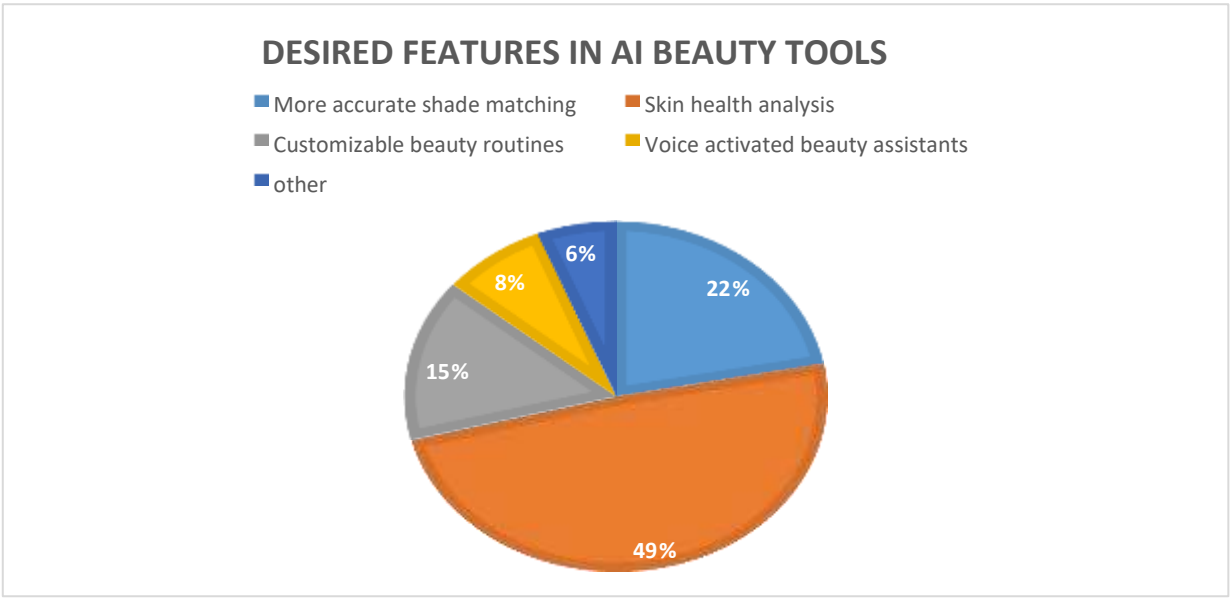


Interpretation: In the above figure, it is seen that 28% of respondents consider it very important, another 28% of respondents consider it somewhat important, 31% of the respondents are neutral about the importance of comparing different products using AI tools in decision making, 8% of respondents feel it is not very important and 5% of respondents feel that it is not important.

Table 8: Table showing additional features in AI powered beauty tools

Desired features in AI beauty tools	Responses (in nos.)	Responses (in %)
More accurate shade matching	22	22
Skin health analysis	49	49
Customizable beauty routines	15	15
Voice activated beauty assistants	8	8
Other	6	6
Total	100	100

Source: Field study



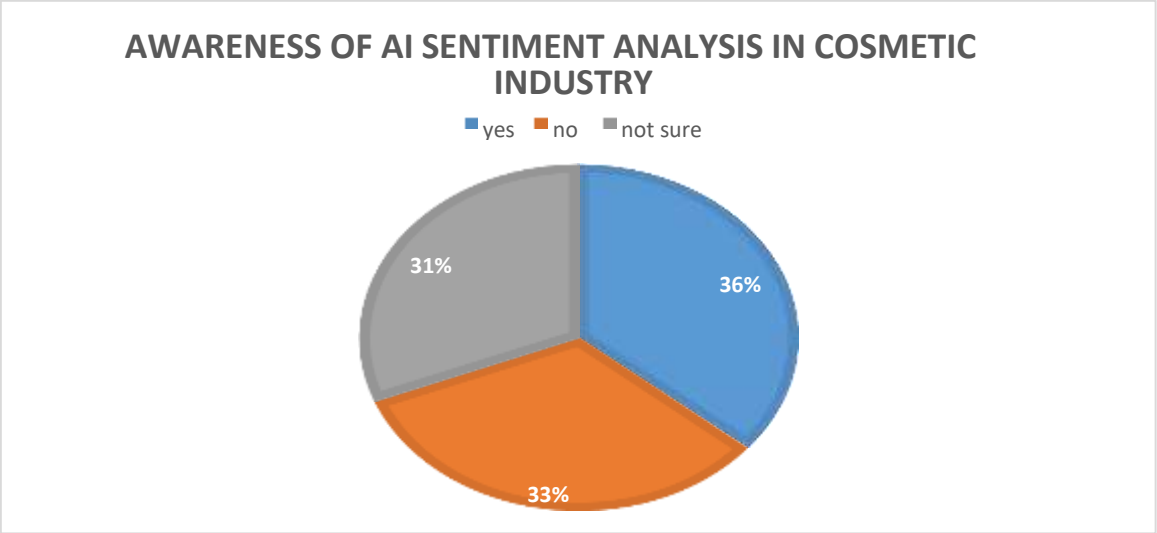
Interpretation: in the figure, it is seen that 22% of respondents want AI powered beauty tools to offer more accurate shade matching, 49% of respondents want AI powered beauty tools to offer skin health analysis, 15% of respondents want AI powered beauty tools to offer customized beauty routines, 8% of respondents want AI powered beauty tools to offer voice activated beauty assistants and 6% of respondents want AI powered beauty tools to offer other features.

C: Objectives 2: To assess the awareness of AI-driven sentiment analysis among cosmetic consumers

Table 9: Table showing awareness of AI driven sentiment analysis in the cosmetic

analysis industryf AI sentiment in cosmetic	**Responses (in nos.)**	**Responses (in %)**
Yes	36	36
No	33	33
Not sure	31	31
Total	100	100

Source: Field study



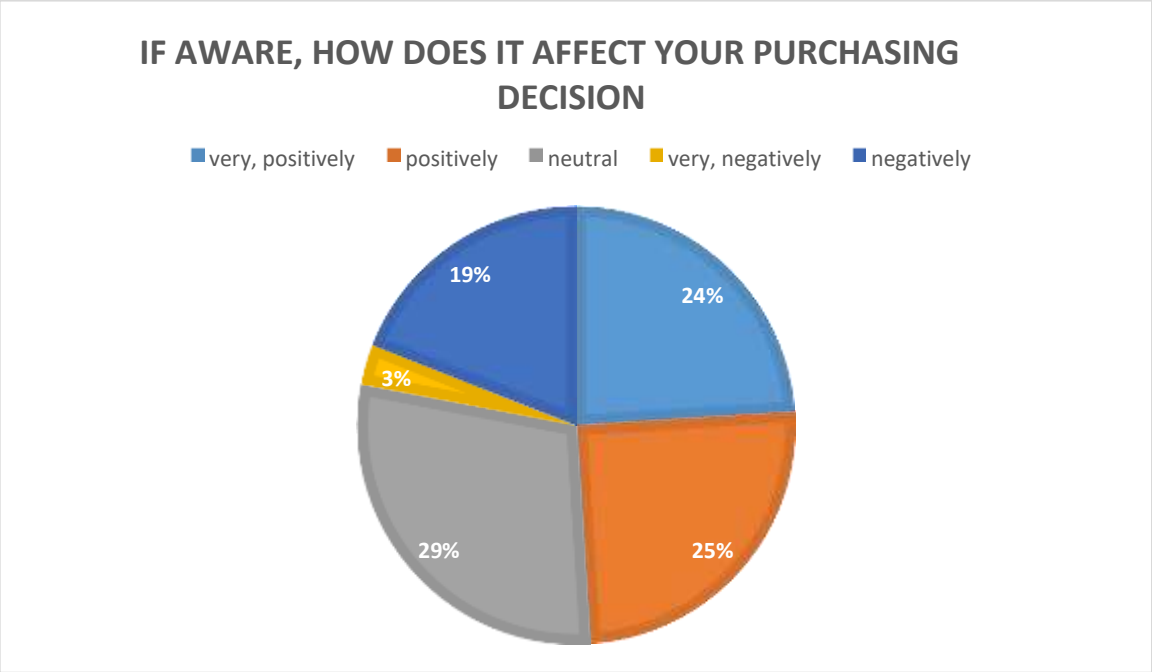
Interpretation: In the above figure, it is seen that 36% of respondents are aware of the use of AI driven sentiment analysis in the cosmetic industry, 33% of respondents are not aware of AI driven sentiment analysis in the cosmetic industry and 31% of respondents are not sure whether they have heard of AI driven sentiment analysis in the cosmetic industry.

Table 10: Table showing the awareness among respondents in AI driven sentiment analysis and how does it affect their purchasing decision

If aware, how does it affect your purchasing decision	**Responses (in nos.)**	**Responses (in %)**	**Male**	**Female**
Very, positively	24	24	4	20
Positively	25	25	9	16

Neutral	29	29	12	17
Very, negatively	3	3	3	0
Negatively	19	19	11	8
Total	100	100		

Source: Field study



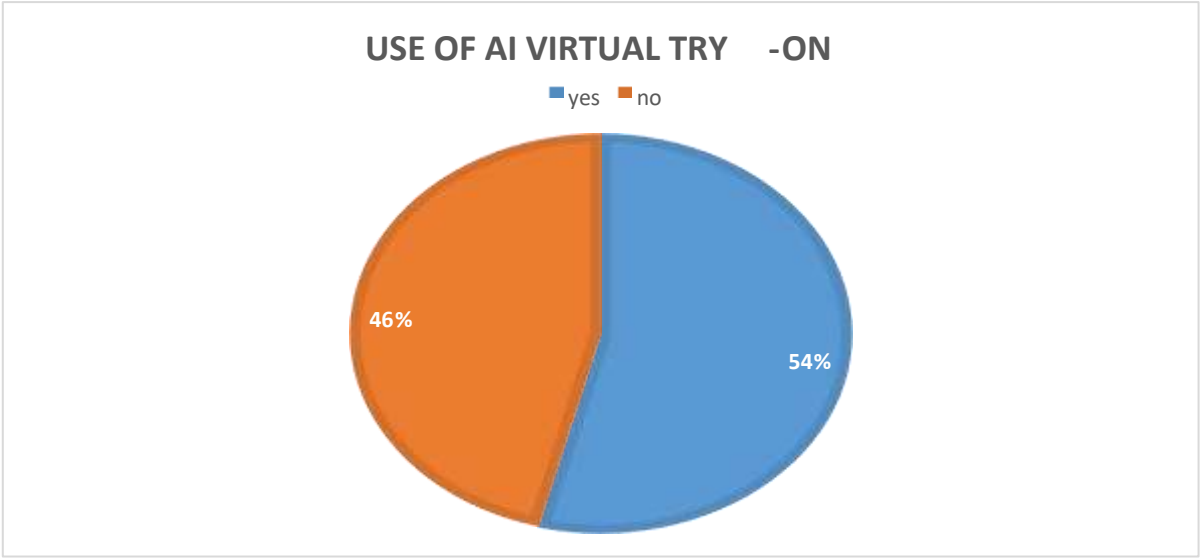
Interpretation: In the above figure, it is seen that 24% of respondents are very positively affected by AI driven sentiment analysis, 25% of respondents are positively affected by AI driven sentiment analysis, 29% of respondents are neutrally affected by AI driven sentiment analysis when making purchasing decision, 3% of respondents are very negatively affected by AI driven sentiment analysis when making purchasing decision and 19% of respondents are negatively affected by AI driven sentiment analysis when making purchasing decision.

D: Objectives 3: To assess the challenges of AI based virtual try-on technology in providing realistic cosmetic product simulation.

Table 11: Table showing usage of AI-based virtual try-on system to try products online

Use of AI virtual try-on	Responses (in nos.)	Responses (in %)
Yes	54	54
No	46	46
Total	100	100

Source: Field study

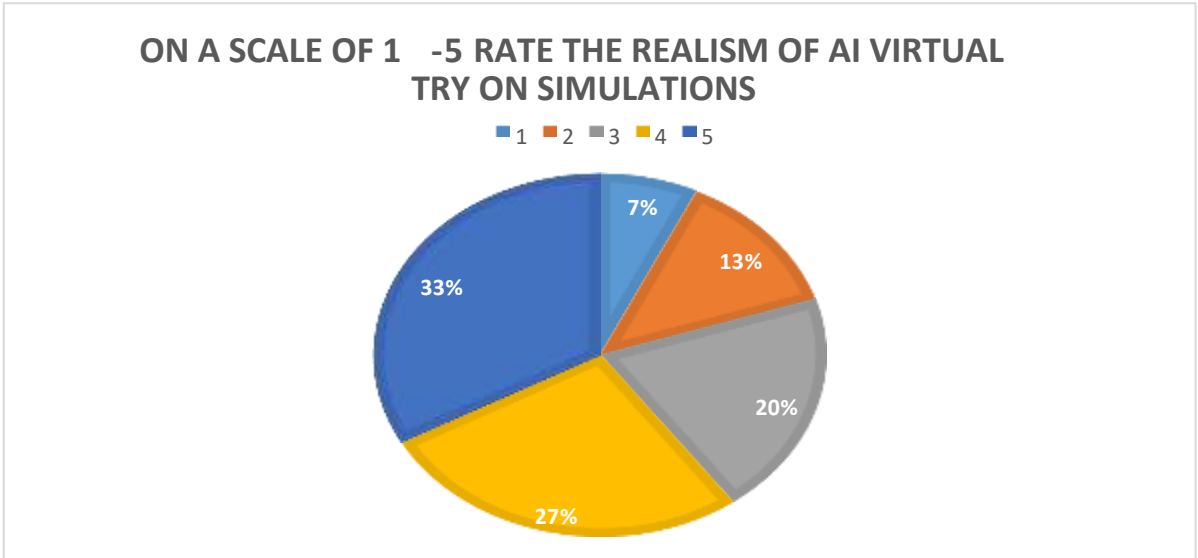


Interpretation: In the above figure, it is seen that 54% of respondents have used an AI-based virtual try on system to try products online and 46% of respondents have not used an AI-based virtual try on system to try products online.

Table 12: Table showing rating of AI-based virtual try-on stimulation for the product

On a scale of 1-5 rate the realism of AI virtual try on simulations	Responses (in nos.)	Responses (in %)
1	7	7
2	13	13
3	20	20
4	27	27
5	33	33
Total	100	100

Source: Field study

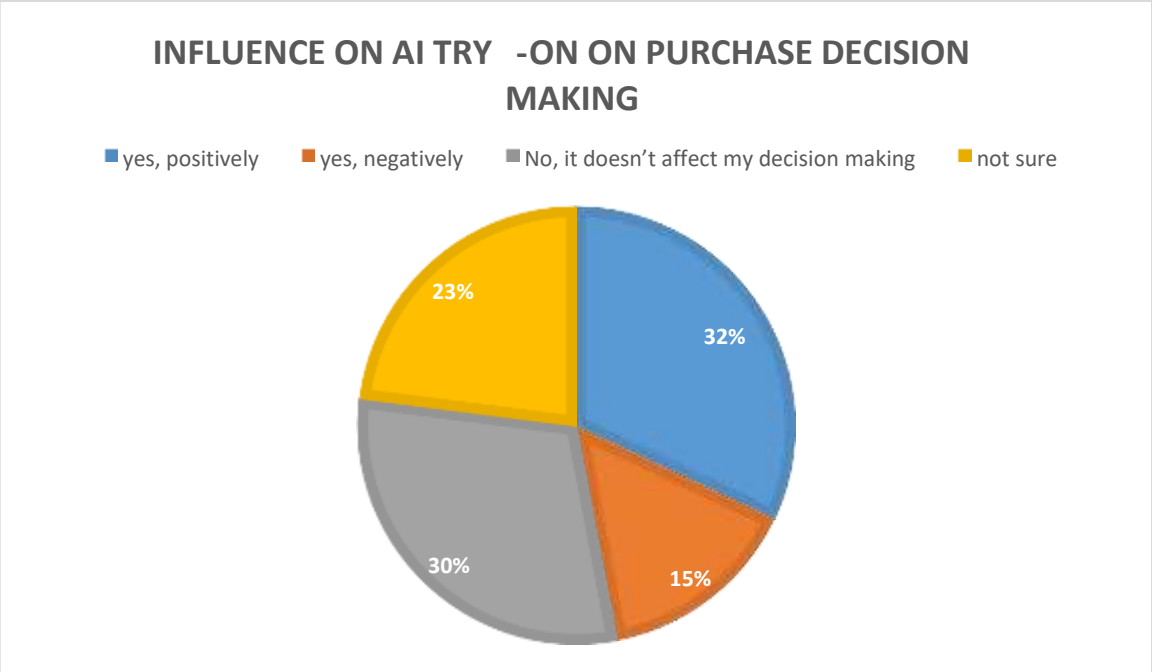


Interpretation: In the above figure, it is seen that 7% of respondents have rated 1, 13% of respondents have rated 2, 20% of respondents have rated 3, 27% of respondents have rated 4 and 33% of respondents rated 5.

Table 13: Table showing impact of AI virtual try-on technology on purchase decision making

Influence on AI try-on on purchase decision making	Responses (in nos.)	Responses (in %)
Yes, positively	32	32
Yes, negatively	15	15
No, it doesn't affect my decision making	30	30
Not sure	23	23
Total	100	100

Source: Field study



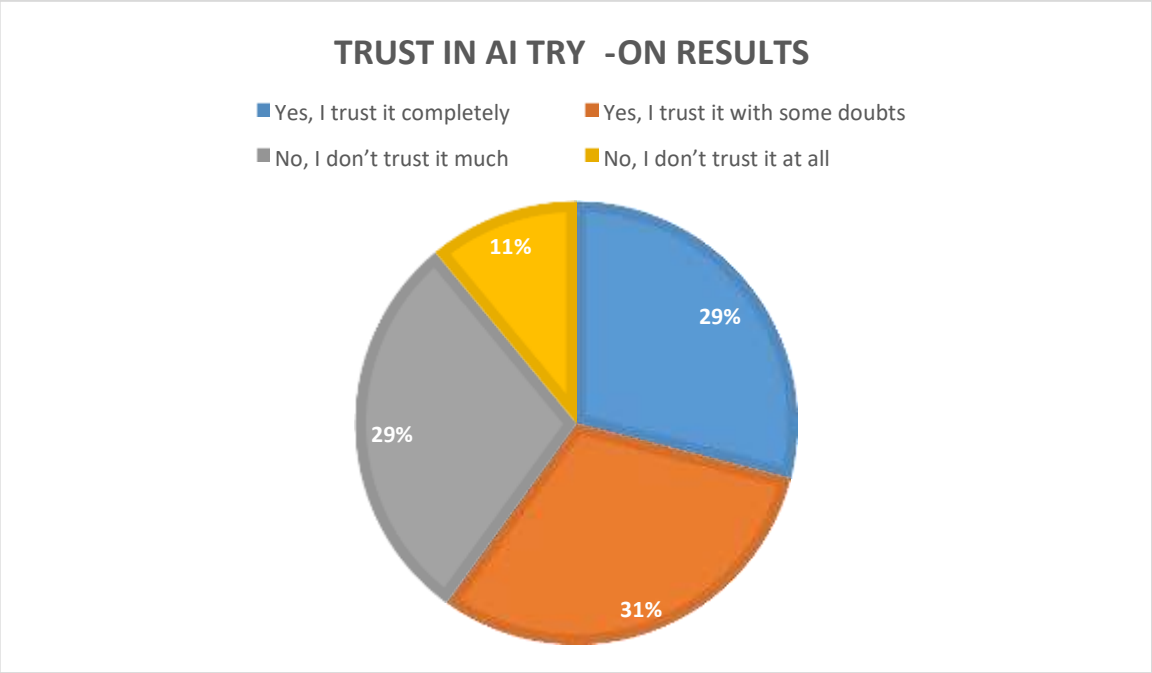
Interpretation: In the above figure, it is seen that 32% of the respondents indicate that AI virtual try-on technology positively affect their decision-making process when purchasing products, 15% of the respondents indicate that AI virtual try-on technology negatively affect their decision-making process when purchasing products, 30% of the respondents indicate that AI virtual try-on technology do not affect their decision-making process when purchasing products and 23% of the respondents are not sure whether AI virtual try-on technology affect their decision-making process when purchasing products.

Table 14: Table showing respondents' trust in AI-based virtual try-on technology for purchasing decisions

Trust in AI try-on results	Responses (in nos.)	Responses (in %)
Yes, I trust it completely	29	29
Yes, I trust it with some doubts	31	31
No, I don't trust it much	29	29

No, I don't trust it at all	11	11
Total	100	100

Source: Field study



Interpretation: In the above, it is seen that 29% of respondents completely trust the results from AI based virtual try-on technology when purchasing products, 31% of respondents trust the results with some doubts from AI based virtual try-on technology when purchasing products, another 29% of respondents do not trust it and 11% of respondents do not trust at all.

VI. FINDINGS

Findings from objectives 1: To study the role of AI in consumer decision making in cosmetic product.

- Diverse cosmetic purchasing patterns are shown by the survey. 31% shop monthly, compared to about 18% who buy weekly, suggesting a consistent base of frequent users. While 27% of respondents rarely make purchases, indicating reduced engagement, 24% buy quarterly, perhaps stockpiling. In the market, there is a mix of regular and infrequent purchasers.
- According to the poll, 52% of participants buy skin care products, making them the most popular. Fragrances come in at 13%, followed by hair care products at 23%. 9% of consumers purchase makeup, compared to just 2% and 1% for nail care and other products, respectively.
- The survey reveals that the majority of participants—68%—are aware of how artificial intelligence is used in cosmetic goods and services, suggesting that technology in the beauty sector is becoming more widely accepted. Nevertheless, 32% remain ignorant, indicating a knowledge gap that companies could need to fill with improved instruction and communication.
- According to the poll, 55% of participants learned about artificial intelligence (AI) in cosmetics on social media, making it the primary source. Thirteen percent were informed via advertisements, and fourteen percent were aware of articles. A lesser percentage obtained their knowledge from personal research (4%), friends or family (8%), and other sources (6%).

- According to 31% of respondents, user evaluations and ratings are the most significant aspect influencing consumers' decisions regarding AI in cosmetics. At 25%, brand reputation comes in second, and 23% is influenced by suggestion accuracy. Just 4% are guided by their prior experiences with AI, whereas 17% care about data security and privacy.
- The survey shows that opinions on the value of comparing cosmetics using AI techniques are divided. With over 28% of respondents viewing it as extremely essential and another 28% viewing it as somewhat significant, AI-assisted decision-making is clearly of great importance to them. 31%, on the other hand, express no opinion, 48 indicating a lack of knowledge. However, 8% think it isn't vital, and 5% think it isn't significant at all.
- According to the survey, 49% of participants said that skin health analysis is the most desired function they would like to see in AI-powered beauty solutions. Given that 22% of respondents are interested, accurate shade matching is also crucial. 15% are drawn to personalized beauty regimens, and 8% are considering voice-activated beauty ideas. Only6% of people are searching for additional features.

Findings from objective 2: To determine the impact of AI-driven sentiment analysis on cosmetic brand perception and consumer trust.

- The survey reveals a reasonably balanced distribution of knowledge regarding sentiment analysis powered by AI in the cosmetics sector. Roughly 36% of those surveyed know how to use it, 33% don't, and 31% aren't sure.
- According to the findings, 49% of respondents think AI-driven sentiment analysis influences their purchasing decisions in a favorable way, compared to 29% who are neutral and 22% who think negatively. This implies that while a sizable percentage of people are still doubtful or unconvinced, the majority of people have a positive opinion about AI in consumer behavior.

Findings from objective 3: To assess the challenges of AI based virtual try on technology in providing realistic cosmetic product simulation.

- According to the survey, 54% of participants have tried things online using an AI-based virtual try-on system, demonstrating a comparatively high level of familiarity with this technology. Nonetheless, 46% have not made use of such systems, indicating that a significant percentage of customers have not yet embraced or investigated this function.
- The study indicates that people's opinions of the rated experience are largely favourable. 20% of respondents gave it a rating of 3, 27% gave it a rating of 4, and 33% gave it a rating of 5, while 7% gave it the lowest rating of 1 and 13% gave it a rating of
- According to the report, 32% of participants believe AI virtual try-on technology helps them make better product decisions. On the other hand, 30% feel it has no influence whatsoever on their decision-making, and 15% think it has a negative effect. Furthermore, 23% are unclear about its impact.
- When buying things, respondents' faith in AI-based virtual try-on technology varies, according to the survey. 31% of respondents had some reservations about the outcomes, whereas 29% have complete faith in them. However, 11% of respondents say they have no faith in the outcomes, and 29% say they do not believe them at all.

VII. CONCLUSION

By providing individualized experiences through tools like virtual try-ons, skin analysis applications, and product suggestions, AI is changing how consumers select and use cosmetic items, according to this study. By customizing recommendations to meet specific needs, these technologies improve decision-making,

increase satisfaction, and lessen ambiguity in online shopping. AI benefits the sector by enabling trend forecasting, giving useful customer insights, and assisting brands in enhancing their product development and marketing. Data privacy, algorithmic bias, and ethical issues are still major obstacles, though. Retaining consumer trust in AI systems requires ensuring transparency, equity, and diversity. Even though AI has a lot of potential to improve cosmetic encounters, more study is required to fully understand its limitations and guarantee responsible integration. Future research should examine the ways in which psychological, cultural, and demographic aspects affect the adoption of AI. Attention should also be paid to technological areas such improved sentiment analysis using multimodal data, limits in identifying different skin tones, and accuracy in virtual try-ons. Finally, by advancing health (SDG 3), gender equality (SDG 5), innovation (SDG 9), sustainable production (SDG 12), and climate action (SDG 13), artificial intelligence (AI) in the cosmetics sector contributes to important SDGs. AI has the potential to improve industry safety, inclusivity, and environmental sustainability when applied properly.

VIII. BIBLIOGRAPHY

1. Russell, S., &Norvig, P. (2021). Artificial Intelligence: A Modern Approach (4th ed.). Pearson
2. Goodfellow, I., Bengio, Y., &Courville, A. (2016). Deep Learning. MIT Press.Wikipedia
3. Brynjolfsson, E., & Mitchell, T. (2017). What can machine learning do? Workforce implications. Science, 358(6370), 1530–1534. https://doi.org/10.1126/science.aap8062Wikipedia
4. Chen, Y., Liu, T. X., Shan, Y., &Zhong, S. (2023). The emergence of economic rationality of GPT. Proceedings of the National Academy of Sciences, 120(1), e2213762120. https://doi.org/10.1073/pnas.2213762120Wikipedia
5. Kaplan, A. M., &Haenlein, M. (2019). Siri, Siri in my hand, who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. Business Horizons, 62(1), 15–25. https://doi.org/10.1016/j.bushor.2018.08.004Wikipedia
6. National Science and Technology Council. (2016). Preparing for the Future of Artificial Intelligence. Executive Office of the President of the United States. https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf
7. Wang, Y., Zhao, Y., & Song, F. (2020). The ethical issues of animal testing in cosmetics industry. Humanities and Social Sciences, 8(4), 112–116. https://doi.org/10.11648/j.hss.20200804.12ResearchGate+1Science Publishing Group+1
8. Sánchez, M., & Gómez, A. (2024). A review of environmental and health effects of synthetic cosmetics. Frontiers in Environmental Science, 12, 1402893. https://doi.org/10.3389/fenvs.2024.1402893Frontiers
9. Shekhawat, K. (2024). The psychological effects of makeup: Self-perception, confidence, and social interaction. International Journal of Advanced Research, 12(5), 48616. https://www.journalijar.com/article/48616/the-psychological-effects-ofmakeup-%3A-self
10. Verywell Mind. (2025). 7 ways your makeup routine is actually helpful for depression. https://www.verywellmind.com/makeup-routine-for-depression11692002Verywell Mind https://www.medicalnewstoday.com/articles/beautystandards-and-mental