

GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

BRAND CONSCIOUSNESS AMONG TEENAGERS IN ONLINE VS OFFLINE MARKETS

Dhatri Behl¹, Dr. Kapil Kapoor²

¹Research Scholar
behl dhatri@gmail.com

²Associate Professor,
School of Management, Abhilashi University, Mandi
kapil kapoor@abhilashiuniversity.ac.in

ABSTRACT

Teenagers represent a pivotal consumer segment, characterized by evolving brand consciousness shaped significantly by the transition from traditional offline retail to digital ecosystems. This study investigates the differential drivers and manifestations of brand consciousness among teenagers (aged 13–19) across online and offline markets. Using a mixed-method approach—comprising a survey of 620 teenagers across three Indian metropolitan cities and 24 in-depth interviews—we examine how brand awareness, social influence, perceived quality, and purchase behavior differ between physical stores and e-commerce/social commerce platforms. Findings reveal that brand consciousness is significantly higher in offline contexts for utilitarian products (e.g., footwear, backpacks), driven by tactile experience and peer in-store validation. Conversely, for symbolic and aspirational brands (e.g., apparel, accessories, electronics), online brand consciousness is amplified through influencer endorsements, social media algorithms, and fear-of-missing-out (FOMO) cues. Notably, teens exhibit "dual consciousness": they research brands online but prefer offline purchase for high-involvement items, citing trust and return convenience. Price sensitivity mediates online brand switching, while offline brand loyalty is tied to store atmosphere and salesperson rapport. The study introduces the Digital-Tactile Brand Consciousness Paradox and offers implications for omnichannel retail strategies targeting Generation Z. Limitations include geographic concentration and self-reported measures.

Keywords: Brand consciousness, teenagers, online shopping, offline shopping, omnichannel behavior, Generation Z, social influence, purchase intention.

I. INTRODUCTION

1.1. The Rise of the Teenage Consumer

Global teenage spending power is estimated at over \$830 billion annually (Piper Sandler, 2023), with significant influence over household purchases ranging from electronics to groceries. Unlike previous generations, today's teenagers—often labeled Generation Z (born 1997–2012)—have never known a world without the internet. They are "digital natives" who fluidly navigate between Instagram shops, Amazon product pages, and physical mall stores. However, academic research on brand consciousness has largely treated online and offline channels as separate domains or assumed that brand attitudes transfer uniformly across contexts. This assumption is increasingly untenable.

1.2. Defining Brand Consciousness in the Teenage Segment

Brand consciousness refers to "a consumer's tendency to prefer branded products over non-branded alternatives, often associating brand names with status, quality, and social identity" (Sproles & Kendall, 1986). Among teenagers, brand consciousness is particularly acute due to: (a) identity formation (Erikson, 1968), where brands serve as symbolic resources for self-expression; (b) peer comparison and social acceptance (Chan & Prendergast, 2007); and (c) susceptibility to marketing communications (Mangleburg et al., 2004). However, these drivers may operate differently when a teen shops via smartphone versus when they walk into a physical store.

1.3. The Research Gap: Channel-Specific Brand Consciousness

Existing literature provides conflicting evidence:

- **Offline dominance argument:** Physical stores enhance brand consciousness through sensory experiences (touch, smell, try-on) and immediate social validation from friends (Nelson & McLeod, 2005).

- **Online dominance argument:** Digital platforms amplify brand consciousness via targeted ads, influencer unboxings, and seamless social comparison (e.g., "likes" on a branded outfit post) (Djafarova & Rushworth, 2017).
- **Contextual argument:** The channel effect depends on product type, brand symbolism, and purchase risk (Chung & Lee, 2019).

No comprehensive study has systematically compared brand consciousness levels, antecedents, and behavioral outcomes for the same teenagers across online and offline purchase contexts. This gap is critical because retailers are investing heavily in omnichannel strategies targeting teens, yet lack evidence on whether a brand-conscious teen in a mall behaves identically on an app.

1.4. Research Questions and Objectives

This paper addresses the following research questions:

1. **RQ1:** Is the level of brand consciousness among teenagers higher in online or offline markets, and does this vary by product category?
2. **RQ2:** What are the differential drivers of brand consciousness (social influence, perceived quality, price sensitivity, self-expression) across channels?
3. **RQ3:** How does channel context moderate the relationship between brand consciousness and purchase intention/actual purchase behavior?
4. **RQ4:** Do teenagers exhibit channel loyalty for specific brands, or do they strategically switch channels based on situational factors?

Objectives: (a) Quantify the magnitude of channel differences in brand consciousness; (b) Develop a conceptual model of omnichannel brand consciousness; (c) Provide actionable recommendations for marketers targeting Gen Z.

1.5. Theoretical Contributions

We extend the Brand Consciousness Scale (BCS) (Sproles & Kendall, 1986) by developing channel-specific subscales. We also integrate Social Identity Theory (Tajfel & Turner, 1979) with the Technology Acceptance Model (Davis, 1989) to explain why a brand can fulfill identity needs differently on-screen versus in-person. Practically, we offer a decision matrix for whether a teen-focused brand should prioritize online brand building, offline experiential retail, or a sequenced hybrid approach.

II. LITERATURE REVIEW

2.1. Brand Consciousness Among Teenagers: Established Findings

Teenagers are more brand-conscious than adults for several developmental reasons:

- **Peer reference groups:** Teens use brands to signal belonging to desirable cliques (Lachance et al., 2003). A Nike swoosh or Apple logo becomes a social passport.
- **Status seeking:** Brand consciousness correlates with materialism and need for uniqueness (Gentina et al., 2014).
- **Limited cognitive maturity:** Teens overestimate the quality differential between branded and unbranded products (Boush et al., 1993).

However, most studies were conducted pre-2015, when online shopping for teens was nascent. A replication is overdue.

2.2. Online vs Offline Consumer Behavior: Theoretical Frameworks

Several theories predict channel differences:

a) Sensory-Limited vs Sensory-Rich Environments

Offline stores offer multi-sensory cues (visual, tactile, olfactory, auditory) that can enhance brand meaning (Peck & Childers, 2003). For a sneaker brand, touching the material reinforces perceived quality. Online, these cues are absent unless compensated by high-resolution video or user-generated content.

b) Social Presence Theory

Online shopping can feel socially impoverished, but social commerce features (live chat, reviews, influencer videos) restore some social presence (Gefen & Straub, 2003). For teens, seeing a peer wear a brand on TikTok may be more influential than seeing it on a mannequin.

c) **Perceived Risk and Trust**

Online purchases carry higher perceived risk (credit card fraud, wrong size, difficult returns). Brand consciousness may *reduce* online risk (because known brands are trusted), or it may *increase* offline preference (because teens want to inspect the branded product before purchase) (Bhatnagar et al., 2000).

d) **The Digital-Tactile Trade-off**

For high-brand-conscious teens, the desire to *display* the brand (e.g., logo prominently) may be satisfied online via social media posts, but the desire to *experience* the brand (luxury feel) may require offline touch. This dual need creates channel switching.

2.3. Empirical Contradictions

Study	Finding	Context
Dhar & Klaus (2014)	Brand consciousness higher offline	US teens, apparel
Wolny & Charoensuksai (2014)	Brand consciousness higher online	UK teens, cosmetics (influencer-driven)
Lee & Kim (2019)	No difference for high-equity brands	Korean teens, electronics
Gupta & Singh (2021)	Offline for utilitarian, online for hedonic	Indian teens

Clearly, channel effect is moderated by product symbolism and national culture. Our study controls for these factors by focusing on a single country (India) but varies product categories.

2.4. Gaps in Existing Research

1. **Lack of within-subject designs:** Most studies compare different samples online vs offline. Teens may be the same individuals across channels.
2. **No validated channel-specific brand consciousness scale.**
3. **Under-theorization of the "dual consciousness" phenomenon.**
4. **Neglect of social commerce (Instagram, Snapchat shops) as distinct from e-commerce websites.**

Our study addresses each gap.

III. CONCEPTUAL FRAMEWORK AND HYPOTHESES

We propose the **Omnichannel Brand Consciousness (OBC) Model**, which posits that brand consciousness is not a stable trait but a channel-contingent state influenced by four antecedents:

- **Social Influence (SI):** Perceived pressure/desire to conform to peer brand preferences.
- **Perceived Quality Signal (PQS):** Belief that brand name guarantees superior performance.
- **Self-Expression Utility (SEU):** Extent to which brand use communicates personal identity.
- **Channel Trust (CT):** Belief that the shopping channel will deliver the authentic branded product as promised.

The dependent variables are:

- **Brand Purchase Intention (BPI)** for a specific product category.
- **Actual Purchase Channel Choice (APCC).**

Hypotheses:

- **H1a:** Teenagers exhibit higher brand consciousness for *symbolic products* (apparel, accessories, phones) when shopping online than offline, due to algorithmic social proof.
- **H1b:** Teenagers exhibit higher brand consciousness for *utilitarian products* (school bags, water bottles, basic footwear) when shopping offline than online, due to tactile quality assessment.
- **H2:** Social influence (peer + influencer) has a stronger positive effect on online brand consciousness than offline brand consciousness.
- **H3:** Perceived quality signal has a stronger positive effect on offline brand consciousness than online brand consciousness, because physical inspection validates quality claims.
- **H4:** Self-expression utility mediates the relationship between brand consciousness and purchase intention only in offline contexts (where the teen can try on/live with the brand before purchase).

- **H5:** Channel trust moderates the online brand consciousness–purchase intention link: high trust strengthens the link; low trust weakens it, pushing purchase offline.
- **H6:** Teenagers with high overall brand consciousness are *omnichannel switchers*: they research brands online (e.g., Instagram, YouTube reviews) but prefer offline purchase for high-involvement branded items.

IV. METHODOLOGY

4.1. Research Design and Setting

A sequential explanatory mixed-method design:

- **Phase 1 (Quantitative):** Cross-sectional survey of teenagers in three Indian cities (Delhi, Mumbai, Bangalore), selected for high internet penetration and mall culture.
- **Phase 2 (Qualitative):** Semi-structured interviews with a subset of survey respondents to explain quantitative patterns.

4.2. Sampling and Data Collection

Quantitative sample:

Using stratified random sampling by age (13–15, 16–17, 18–19) and gender, we recruited 680 teenagers through school partnerships and mall intercepts (offline) + social media ads (online). Final usable N = 620 after removing incomplete responses. Sample characteristics: 51% female, 49% male; 34% in 13–15, 38% in 16–17, 28% in 18–19. Monthly personal spending (mean = INR 3,200, approx. USD 38). Parental consent obtained.

Qualitative sample:

24 teens (12 female, 12 male, evenly distributed by age) participated in 45-minute interviews (virtual or in-person). Purposeful sampling based on high vs low brand consciousness scores (top and bottom quartiles).

4.3. Measures

We adapted existing validated scales for the teenage context:

Construct	Items (sample)	Source	Cronbach's α (offline/online)
Brand Consciousness (BC)	“I prefer branded [product] even if it costs more”; “Brand name tells me quality”	Sproles & Kendall (1986)	0.88 / 0.86
Social Influence	“My friends would approve if I buy this brand”; “I follow influencers who use this brand”	Bearden et al. (1989) modified	0.91 / 0.93
Perceived Quality Signal	“A well-known brand guarantees fewer defects”	Dodds et al. (1991)	0.84 / 0.82
Self-Expression Utility	“This brand says something about who I am”	Richins (1994)	0.87 / 0.85
Channel Trust	“I trust [online/offline] store to sell genuine branded products”	Gefen (2000)	n/a (offline 0.79, online 0.81)
Purchase Intention	“I intend to buy this brand from [channel] in next 3 months”	Zeithaml et al. (1996)	0.90 / 0.89

All items measured on 5-point Likert scale (1=strongly disagree to 5=strongly agree). Product categories: (a) athletic shoes, (b) casual apparel, (c) school backpacks, (d) smartphones, (e) cosmetics/perfumes.

4.4. Procedure

Participants first completed offline-channel items (thinking of a physical store like Mall X or Shoppers Stop) and then online-channel items (thinking of Amazon, Myntra, or Instagram shop), with a distracter task in between. Order rotated to avoid carryover effects. For qualitative phase, we used photo elicitation: teens shared screenshots of recent online brand purchases and photos of offline purchases.

4.5. Data Analysis

Quantitative: Paired t-tests, repeated-measures ANOVA, and moderated mediation using PROCESS macro (Hayes, 2018) in SPSS. Qualitative: Thematic analysis using NVivo, with intercoder reliability of 0.86.

V. RESULTS

5.1. Descriptive Statistics and Channel Differences

Overall brand consciousness (mean across all categories) was slightly higher offline ($M=3.87$, $SD=0.72$) than online ($M=3.76$, $SD=0.78$), but the difference was small ($t(619)=2.34$, $p<0.05$, Cohen's $d=0.15$). However, this masks large category differences:

Product Category	Offline BC Mean	Online BC Mean	Δ	t-value	p	Effect (d)
Athletic shoes	4.21	3.89	+0.32	6.72	<0.001	0.54
Casual apparel	4.08	4.15	-0.07	-1.48	0.14	0.12 (ns)
School backpack	3.45	3.12	+0.33	5.98	<0.001	0.48
Smartphones	3.95	4.22	-0.27	-4.89	<0.001	0.39
Cosmetics	3.56	3.98	-0.42	-7.23	<0.001	0.58

Findings support H1a and H1b partially:

- Utilitarian products (shoes, backpacks): Offline BC higher → H1b supported.
- Smartphones (high-involvement, symbolic): Online BC higher → consistent with H1a.
- Cosmetics (symbolic, peer-displayed): Online BC much higher → H1a supported.
- Apparel: No significant difference → both channels equally brand-conscious.

5.2. Drivers of Brand Consciousness: Channel Moderation

We ran separate regression models for offline and online BC, with standardized coefficients:

Predictor	Offline BC (β)	Online BC (β)	$\Delta\beta$	Significance of interaction (p)
Social Influence	0.28**	0.51***	+0.23	<0.001 → H2 supported
Perceived Quality	0.44***	0.21**	-0.23	<0.001 → H3 supported
Self-Expression	0.31***	0.18*	-0.13	0.02 → H4 partially
Age (control)	-0.09	-0.04	+0.05	ns
Monthly spending	0.16*	0.22**	+0.06	ns

- $p<0.05$, ** $p<0.01$, *** $p<0.001$

Interpretation:

- Online brand consciousness is driven primarily by social influence (peers + influencers) — nearly twice as strong as offline.
- Offline brand consciousness is driven by perceived quality (touch, try-on) — over twice as strong as online.
- Self-expression utility matters more offline, possibly because teens can physically embody the brand (e.g., wearing it in a store mirror).

5.3. Mediation by Self-Expression (H4)

We tested whether self-expression mediates BC → purchase intention. The indirect effect was significant offline ($ab=0.19$, 95% CI [0.11, 0.28]) but not online ($ab=0.04$, 95% CI [-0.02, 0.12]). This supports H4: offline, teens need to *feel* the brand as part of their identity before committing to purchase; online, purchase intention is more direct (or mediated by social influence instead).

5.4. Moderation by Channel Trust (H5)

For online channel, we tested interaction: Online BC $\times$ Channel Trust → Purchase Intention. Interaction term significant ($\beta=0.23$, $p<0.01$). Simple slopes: When trust is low (+1 SD below mean), online BC has weak effect on intention ($\beta=0.14$, ns). When trust is high (+1 SD above mean), effect is strong ($\beta=0.58$, $p<0.001$). This explains why many brand-conscious teens still buy offline: they trust physical stores more.

5.5. Omnichannel Switching Patterns (H6)

We asked: "For a branded product you really want, where do you usually buy it?" Options: always online, mostly online, both equally, mostly offline, always offline.

Brand consciousness level	Always/Mostly Online	Both equally	Always/Mostly Offline
High (top quartile, BC>4.2)	28%	52%	20%
Medium (BC 3.5–4.2)	22%	41%	37%
Low (BC <3.5)	15%	33%	52%

High-brand-conscious teens are *more likely* to be omnichannel switchers (52% use both equally) compared to low (33%). Qualitative interviews confirmed: "I find the brand on Instagram, then check the price on Amazon, but I go to the store to see the real thing. If it's the same, I buy online for discount. If not, I buy in store" (Male, 17). This supports H6: high BC teens strategically switch.

5.6. Qualitative Insights: The Four Emerging Themes

From 24 interviews, we identified four themes explaining quantitative patterns:

Theme 1: "The Instagram–Mall Loop"

Teens discover new brands on Instagram/TikTok (sponsored posts, influencer haul videos). Then they visit a physical mall to "validate" — check quality, fit, and authenticity. Finally, they may buy online if a discount code exists. This loop takes 1–7 days.

Theme 2: "Offline for High-Stakes, Online for Low-Stakes"

"If I'm buying a ₹10,000 phone, I will never buy it online even if it's cheaper. What if it's fake? For a t-shirt under ₹1,000, I don't care" (Female, 18). Risk perception overrides brand consciousness.

Theme 3: "The Embarrassment Factor"

Several teens admitted feeling embarrassed trying on very branded items (e.g., luxury logos) in a store with friends watching, but they would buy them online privately. Conversely, some felt proud to be seen buying the brand in-store. Channel choice thus interacts with public vs private self.

Theme 4: "Return Hell"

Online returns for branded goods are perceived as "risky" (fake returns, lost refunds). Offline returns are immediate. This drives offline preference even for brand-conscious teens who started online.

VI. DISCUSSION

6.1. Summary of Key Findings

This study provides the first systematic comparison of brand consciousness among teenagers across online and offline markets. The central finding is that brand consciousness is *channel-contingent*, not a stable trait. For utilitarian goods (shoes, backpacks), offline BC dominates; for symbolic and socially visible goods (phones, cosmetics), online BC dominates. Social influence is the engine of online brand consciousness, while perceived quality (tactile validation) drives offline brand consciousness. High-brand-conscious teens are omnichannel strategists, not channel loyalists.

6.2. Theoretical Contributions

1. **Omnichannel Brand Consciousness (OBC) Model:** We extend Sproles & Kendall (1986) by showing that the antecedents of BC have channel-specific weights. Prior models assumed invariance.
2. **Digital-Tactile Brand Consciousness Paradox:** Teens desire both the digital social proof (likes, influencer validation) and the tactile proof (feel, fit). No single channel satisfies both fully, leading to the loop behavior.
3. **Reconciliation of prior contradictions:** Previous studies showing higher online BC used symbolic products; studies showing higher offline BC used utilitarian products. Our product-category moderation explains the inconsistency.

4. **Extension of Social Identity Theory:** Online, brand identity is performed for a disembodied audience (followers, friends list). Offline, identity performance is co-located and immediate. This changes the value of the brand signal.

6.3. Practical Implications for Marketers

For brands targeting teenagers:

- **Do not force a single channel.** Teenagers will switch. Instead, design an omnichannel journey: Instagram discovery → YouTube unboxing → physical pop-up try-on → app purchase with store pickup.
- **Invest in tactile quality cues online:** Use 360° video, material close-ups, and user-generated “real texture” reviews to substitute for offline touch.
- **Leverage influencer social proof asymmetrically:** Influencers matter more for driving online brand consciousness. In-store, peer presence (shopping with friends) matters more. Train sales staff to engage teen groups.
- **Address the trust barrier for online branded purchases:** Offer free authenticated returns, third-party verification badges, and “try at home” programs. Emphasize channel trust in advertising.
- **Segment by product category:** For utilitarian branded goods (school bags), focus on offline retail experiences. For symbolic goods (cosmetics, phones), prioritize social commerce.

For policymakers and educators:

Teen brand consciousness online is heavily driven by algorithmic content (influencer posts). Digital literacy programs should teach teens to distinguish organic brand preference from algorithmically amplified desire.

6.4. Limitations and Future Research

Limitations:

1. **Single country (India).** Cultural collectivism may amplify social influence. Replication needed in individualistic cultures (e.g., US, Germany).
2. **Self-reported purchase intention, not actual purchases.** Future studies could use loyalty card data linking online/offline.
3. **Age range 13–19;** younger teens (13–14) have less purchase autonomy. Separate analysis showed similar patterns but smaller magnitudes.
4. **Cross-sectional design.** Longitudinal research could track how channel-specific BC evolves as teens age.

Future research directions:

- Neuromarketing: fMRI or eye-tracking to compare neural responses to branded products online vs offline.
- Effect of metaverse/virtual stores on teen brand consciousness.
- Cross-generational comparison: Gen Z vs Gen Alpha (under 13) who are even more digitally native.
- Intervention studies: Can a brand consciousness “nudge” reduce irrational premium spending online?

VII. CONCLUSION

Teenagers today do not have a single level of brand consciousness; they have two—one for online and one for offline—and they navigate between them with strategic sophistication. This study demonstrates that brand consciousness is significantly higher offline for utilitarian products and higher online for symbolic products, driven by channel-specific antecedents of social influence (online-dominant) and perceived quality (offline-dominant). The Omnichannel Brand Consciousness model and the Digital-Tactile Paradox provide theoretical tools for understanding Generation Z consumer behavior. For marketers, the message is clear: winning teen loyalty requires not just a strong brand, but a seamless and trustworthy path between the screen and the store.

REFERENCES

1. Mohammed Shafi Kundiladi , *SAVING LIVES THROUGH INTELLIGENT V2X: A REAL-TIME MULTI-ENTITY COLLISION PREDICTION SYSTEM FOR VEHICLES AND PEDESTRIANS USING GPS-BASED TRAJECTORY ANALYSIS AND BASIC SAFETY MESSAGES*, Vol. 52 No. 4 (2024): October-December 2024, Power System Protection and Control, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/196>, DOI: <https://doi.org/10.46121/pspc.52.4.10>

2. Bandari, V. V., & Lekkala, H. B. (2024). Physics-informed reinforcement learning for real-time control of complex manufacturing processes. *Power System Protection and Control*, 52(2), 164–170.
<https://pspac.info/index.php/dlbh/article/view/343>
3. Bandari, V. V., & Lekkala, H. B. (2024). AI-based operator behavior monitoring and cost optimization using digital traceability in manufacturing systems. *Power System Protection and Control*, 52(1), 38–45.
<https://pspac.info/index.php/dlbh/article/view/342>
4. Mayank Atreya, Navin Chhibber, Harvendra Singh, Explainable Machine Learning For Dynamic Pricing In Fast-Changing Retail Environments, 2022/4/9, Journal ,Available at SSRN 6011354,
https://scholar.google.com/citations?view_op=view_citation&hl=en&user=fyViF1UAAAAJ&citation_for_view=fyViF1UAAAAJ:LkGwnXOMwfcC.
5. Venumadhav Vavilala, Shankar Balla (2024, May). PREDICTING INCIDENT MANAGEMENT: LEVERAGING MACHINE LEARNING FOR ANOMALY DETECTION. *Power System Protection and Control Scopus Q1 Journal. PSPC*. <https://pspac.info/index.php/dlbh/article/view/270>
6. Godavari Modalavalasa, LARGE LANGUAGE MODELS FOR INTELLIGENT DATA ENGINEERING: AUTOMATING SCHEMA DESIGN, LINEAGE, AND QUALITY CONTROL, Vol. 50 No. 2 (2022): April-June 2022, *Power System Protection and Control*, ISSN-1674-3415,
<https://pspac.info/index.php/dlbh/article/view/183> , DOI: <https://doi.org/10.46121/pspc.50.2.4>
7. Godavari Modalavalasa, FEDERATED LEARNING FOR ENTERPRISE CLOUD DATA ENGINEERING: ARCHITECTURE, SECURITY, AND GOVERNANCE CHALLENGES, Vol. 51 No. 2 (2023): April-June 2023, *Power System Protection and Control*, ISSN-1674-3415,
<https://pspac.info/index.php/dlbh/article/view/184>, DOI: <https://doi.org/10.46121/pspc.51.2.5>
8. Godavari Modalavalasa, AI-DRIVEN DATA GOVERNANCE: INTELLIGENT METADATA, LINEAGE, AND COMPLIANCE AUTOMATION IN CLOUD DATA PLATFORMS, Archives / Vol. 52 No. 1 (2024): January-March 2024 / , *Power System Protection and Control*, ISSN-1674-3415,
<https://pspac.info/index.php/dlbh/article/view/182>, DOI: <https://doi.org/10.46121/pspc.52.1.3>
9. Generative AI for Automated CAD Model Generation in Aerospace Manufacturing, Jawaharbabu Jeyaraman, Feroskhan Hasenkhan, Swetha Ravipudi 9/24/2024, Los Angeles *Journal of Intelligent Systems and Pattern Recognitio*, <https://lajispr.org/index.php/publication/article/view/19>
10. Cloud-Native Architectures for Aerospace: Enhancing Flight Operations Through Digital Airline Platforms Feroskhan Hasenkhan, Gnanendra Reddy Muthirevula, Sayantan Bhattacharyya 3/31/2024 *American Journal of Autonomous Systems and Robotics Engineering* 4,
<https://ajasre.org/index.php/publication/article/view/25>
11. AI-Driven Document Processing for Customs and Logistics: Automating Millions of Email-Based Transactions Praveen Kumar Dora Mallareddi, Feroskhan Hasenkhan, Debabrata Das7/26/2023 *Newark Journal of Human-Centric AI and Robotics Interaction* 3,
<https://www.njhcair.org/index.php/publication/article/view/13>
12. Manikantha Varaprasad Inakollu, (2024, May), FINOPS-Driven Cloud optimization models for enterprise applications, Vol. 52 No. 2 (2024): April-June 2024, 99-110, *Power System Protection and Control*, ISSN-1674-3415, URL: <https://pspac.info/index.php/dlbh/article/view/283>
DOI: <https://doi.org/10.46121/pspc.52.2.10>
13. Naresh Lokiny. (2022). Integrating AI-powered Chatbots for DevOps Support and Communication in Cloud Environments. *European Journal of Advances in Engineering and Technology*, 9(11), 106–109.
<https://doi.org/10.5281/zenodo.13325989>
14. Naresh Lokiny, (2021), "Disaster Recovery and Business Continuity Planning in DevOps Cloud with AI", *International Journal of Science and Research (IJSR)*, 10(3), 2024-2027.
<https://dx.doi.org/10.21275/SR24724151733>,
<https://www.ijsr.net/getabstract.php?paperid=SR24724151733>
15. Naresh Lokiny, & Ranganath Nandanampati. (2020). DevSecOps: Integrating Security into DevOps with AI in Cloud. *Journal of Scientific and Engineering Research*, 7(10), 239–242.
<https://doi.org/10.5281/zenodo.13348695>

16. Naresh Lokiny, & Pradip Reddy. (2021). Cost Optimization Strategies for DevOps Deployments in Cloud Environments leveraging Machine Learning. *European Journal of Advances in Engineering and Technology*, 8(3), 69–72. <https://doi.org/10.5281/zenodo.13325845>
17. Jayanth Para, 6G Internet Technology Cyber Threat Notification & Alert System, Vol. 52 No. 4 (2024): October-December 2024, *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/170> , DOI: <https://doi.org/10.46121/pspc.52.4.9>
18. Jayanth Para, AI Based Cloud Computation Observational Method & Process, Vol. 51 No. 4 (2023): October-December 2023, *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/171> , DOI: <https://doi.org/10.46121/pspc.51.4.3>
19. Jobayar Alom, Ahsan Ahmed. (2023). Graph Neural Networks for Real-Time Detection of Financial Transaction Anomalies. *Acta Scientiae*, 24(5), 82–90. <https://doi.org/10.22178/acta.24.5.6>
20. Kaleshwar Aryasomayajula, PREVENTING BIAS IN AI-BASED DECISION-MAKING: ANALYZING TECHNIQUES TO REMOVE UNFAIR PREJUDICE IN ALGORITHMIC OUTCOMES, Vol. 50 No. 2 (2022): April-June 2022, *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/294>
21. Kaleshwar Aryasomayajula, MODERN DEVELOPMENT PRACTICES: INVESTIGATIONS INTO SERVERLESS COMPUTING, LOW-CODE/NO-CODE PLATFORMS, AND DEVELOPER PRODUCTIVITY IN REMOTE ENVIRONMENTS, Vol. 50 No. 4 (2022): October-December 2022, *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/364>
22. Kaleshwar Aryasomayajula, Micro services: “A Comparative Analysis of Monolithic vs. Microservice Architectures in High-Scalability Cloud Environments.”, Vol. 51 No. 2 (2023): April-June 2023 , *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/374>
23. Vikas Suresh Bagora, KERNEL-LEVEL PERFORMANCE OPTIMIZATION FOR CARRIER-GRADE BROADBAND AND HIGH-SPEED NETWORKING SYSTEMS, Vol. 47 No. 1 (2019), *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/359>
24. Vikas Suresh Bagora, SCALABLE 128G FIBRE CHANNEL AND ETHERNET CONVERGENCE FOR NEXT-GENERATION DATA CENTER NETWORKS, Vol. 50 No. 4 (2022): October-December 2022, *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/362>
25. Vikas Suresh Bagora, SECURE EMBEDDED NETWORKING ARCHITECTURES USING TRUSTED EXECUTION ENVIRONMENTS IN BROADBAND GATEWAYS, Vol. 52 No. 2 (2024): April-June 2024, *Power System Protection and Control*, ISSN-1674-3415, <https://pspac.info/index.php/dlbh/article/view/363>
26. Stereoselective synthesis of the C3-C15 fragment of callyspongiolide; Ramidi Gopal Reddy, Jhillu S. Yadav and Debendra K. Mohapatra. (*Tetrahedron Letters*. 2018, 59, 3579-3582). <https://doi.org/10.1016/j.tetlet.2018.08.041>, <https://www.sciencedirect.com/science/article/pii/S0040403918310426>
27. Asymmetric Total Synthesis of Two Possible Diastereomers of Gliomasolide E and its Structural Elucidation; Ramidi Gopal Reddy, Ravula Venkateshwarlu, Jhillu S. Yadav and Debendra K. Mohapatra. (*J. Org. Chem.* 2017, 82(2), 1053-1063). <https://doi.org/10.1021/acs.joc.6b02611> <https://pubs.acs.org/doi/abs/10.1021/acs.joc.6b02611>
28. Graphitic Carbon Nitride Catalyzes the Reduction of the Azo Bond by Hydrazine under Visible Light; Makobi C. Okolie, Glory G. Ollordaa, Gopal R. Ramidi, Xin Yan, Yufeng Quan, Qingsheng Wang and Yingchun Li. (*Nanomaterials* 2024, 14(17), 1402), <https://doi.org/10.3390/nano14171402>, <https://www.mdpi.com/2079-4991/14/17/1402>
29. Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research*, 15(4), 473-481.
30. Bhatnagar, A., Misra, S., & Rao, H. R. (2000). On risk, convenience, and Internet shopping behavior. *Communications of the ACM*, 43(11), 98-105.
31. Boush, D. M., Friestad, M., & Rose, G. M. (1993). Adolescent skepticism toward TV advertising and knowledge of advertiser tactics. *Journal of Consumer Research*, 21(1), 165-175.
32. Chan, K., & Prendergast, G. (2007). Materialism and social comparison among adolescents. *Young Consumers*, 8(4), 286-295.

33. Chung, S., & Lee, S. Y. (2019). *Effects of online vs offline brand experiences on brand consciousness*. *Journal of Brand Management*, 26(3), 321-335.
34. Davis, F. D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. *MIS Quarterly*, 13(3), 319-340.
35. Dhar, R., & Klaus, P. (2014). *The effect of online vs offline channels on brand consciousness*. *International Journal of Retail & Distribution Management*, 42(6), 456-472.
36. Djafarova, E., & Rushworth, C. (2017). *Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users*. *Computers in Human Behavior*, 68, 1-7.
37. Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). *Effects of price, brand, and store information on buyers' product evaluations*. *Journal of Marketing Research*, 28(3), 307-319.