

# ***Project :***

## **Navigating the Digital Landscape: Enhancing Brand Reputation with Cutting-Edge Social Media Monitoring**

### ***Business Introduction :***

**AfriTech Electronics Ltd.** stands out as a prominent player in the global consumer electronics sector, particularly renowned for its innovative offerings in smartphones, tablets, and wearable technology. The company is headquartered in the United States and has been growing steadily, now boasting a workforce of 200 dedicated employees. In the fiscal year 2022, AfriTech Electronics achieved an impressive annual revenue of \$2 million.

This achievement is a testament to the company's unwavering commitment to quality and its focus on integrating cutting-edge technology into its products. Such dedication has not only helped **AfriTech Electronics** carve a niche for itself in the competitive electronics market but has also garnered it a reputation as a reliable and trusted brand among consumers worldwide. The company's strategic focus on key technological trends and commitment to excellence positions it for continued success and influence in the international electronics industry.

### ***Business Problem :***

**AfriTech Electronics Ltd.** has been facing a growing challenge related to its brand reputation. In recent years, the company has encountered several issues such as negative customer reviews, product recalls, and public relations crises. These issues have led to a decline in customer trust and have affected sales and market share.

### **Specific Problems :**

**A. Negative Social Media Buzz :** The company is experiencing a surge in negative social media conversations about its products and customer service. These conversations are damaging its brand image.

**B. Customer Complaints:** Complaints related to product defects, delays in customer support response, and billing issues have been rising, leading to a drop in customer satisfaction.

**C. Product Recalls:** Recent product recalls have received significant media attention, causing panic among customers and stakeholders.

**D. Competitive Pressure:** Rivals are gaining market share by exploiting AfriTech Electronics Ltd.'s reputation challenges.

## ***Rationale for the Project :***

The primary objectives of this project are as follows :

**A. Protecting Market Position:** Maintaining a positive brand reputation is vital to retaining market share and fend in off competition.

**B. Customer Retention:** Improving customer satisfaction and addressing concerns promptly can reduce customer churn.

**C. Crisis Mitigation:** Effective monitoring can help identify and address potential crises before they escalate.

**D. Data-Driven Decision-Making:** Social media monitoring tools provide valuable insights into customer sentiment, enabling data-driven decision-making

**E. Enhanced Marketing:** Consistent messaging and understanding customer preferences can lead to more effective marketing campaigns.

## ***Aim of the Project :***

Brand reputation is a critical asset in the consumer electronics industry, and social media plays a pivotal role in shaping influencing public perception. The significance of initiating this project lies in addressing the following key reasons:

**A. Monitor Social Media Conversations:** Continuously monitor social media platforms for mentions of the company and its products.

**B. Sentiment Analysis:** Analyze sentiment in social media conversations to identify positive and negative trends.

**C. Customer Issue Resolution:** Identify and prioritize customer complaints and issues for swift resolution.

**D. Crises Detection:** Implement early warning systems to detect potential crises and take proactive measures.

## ***Data Description :***

**CustomerID:** A unique identifier for each customer.

**Customer Name:** The name of the customer.

**Region:** The region or state associated with the customer.

**Age:** The age of the customer.

**Income:** The income of the customer.

**CustomerType:** The type of customer, which can be 'New', 'Returning', or 'VIP'.

**CustomerID:** A reference to the customer who made the transaction.

**Transaction Year:** The year in which the transaction occurred (e.g., 2021, 2022, 2023).

**Transaction Date:** The date of the transaction.

**Product Purchased:** The product purchased (e.g., 'Smartphone', 'Tablet', 'Laptop', 'Smartwatch').

**Purchase Amount:** The amount spent on the purchase.

**Product Recalled:** A boolean indicating whether the purchased product was recalled.

**Competitor:** The competitor associated with the transaction, if any.

**CustomerID:** A reference to the customer who interacted on social media.

**Interaction Date:** The date of the social media interaction.

**Platform:** The social media platform where the interaction occurred (e.g., 'Twitter', 'Facebook', 'Instagram').

**Post Type:** The type of social media post (e.g., 'Text', 'Image', 'Video', 'Link', 'Story').

**Engagement Likes:** The number of likes the post received.

**Engagement Shares:** The number of shares or retweets the post received.

**Engagement Comments:** The number of comments the post received.

**User Followers:** The number of followers the user has.

**Influencer Score:** A score representing the influence of the user.

**BrandMention:** A boolean indicating whether the post mentioned the brand.

**Competitor Mention:** A boolean indicating whether the post mentioned a competitor.

**Sentiment:** The sentiment of the post, which can be 'Positive', 'Neutral', or 'Negative'.

**Competitor:** The competitor mentioned in the post, if any.

**Crisis Event Time:** The date of a crisis event mentioned in a negative post.

**First Response Time:** The date of the first response to a negative post.

**Resolution Status:** A boolean indicating whether the crisis was resolved.

**NPS Response:** The Net Promoter Score (NPS) response associated with the post.

Tech Stack

# INSIGHTS

- 1.customer Age distribution : min - 18 , max-69 , Avg - 44
- 2.income distribution : max-124667 \$ , min-16200 \$ , Avg -62241.32 \$
- 3.Top-5 heighest Customer State : Nebraska , West Virginia ,Montana , Utah, Oklahoma
- 4.Customer Type : Returning - 35969 , VIP - 31159 , New - 6458
- 5.Purchased product : Laptop :19527, Smartphone :19081 , Tablet :18195 , Smartwatch : 16783
- 6.Year wise purchase : 2021 : 24733 , 2022 : 23396 , 2023 : 25457
- 7.Year wise Revenue : 2021 : 19402688.87 \$ , 2022 : 18213577.3 \$ , 2023 : 19917979.37 \$
- 8.customer wise Most purchased product : New : Laptop , Returning : Smartphone , VIP : Smartphone
- 9.Sentiment Analysis: Positive : 30179 , Neutral : 30024 , Negative : 13383
- 10.Year Wise Negative Sentiments : 2021 : 4504 , 2022 : 4216 , 2023 : 4663
- 11.Year Wise Positive Sentiments : 2021 : 10150 , 2022 : 9611 , 2023 : 10418
- 12.Customer Type And Negative Sentiments : Returning : 6379 , VIP : 5757 New : 1247
- 13.Post Type And Total Social Media Engagement (Likes + share + comments) : Image-61957189 , Video-59143566 , Link-57869538 , Story-57582986 , Text -55920354

14. Most Engaged Social Media Platform: TikTok- 60792235, Instagram-60327321  
Twitter-59112347 LinkedIn -57392859 , Facebook-54848871
15. Platform Wise Users Followers : TikTok - 784771251 , Instagram-751164357  
Twitter-728797217 , LinkedIn-706880465 , Facebook-696402613
16. Platform wise Negative Sentiments : Instagram -2882 , LinkedIn -2870  
, TikTok -2683 , Facebook - 2483 , Twitter- 2465
17. Platform wise Positive Sentiments : LinkedIn -6191, Instagram -6082  
TikTok -6021 , Facebook-5983, Twitter-5902
18. how much the brand is being talked about compared to competitors :  
Total Brand Mention : 37773 , Total Competitor Mention : 36870
19. brand talked about positive way : 15385
20. compititor talked about positive way : 14709
21. brand talked about Negative way : 6543
22. compititor talked about Negative way : 6775
23. influencer Score : Min - 0.118 Max - 99.972
24. Influencer Score Distribution : (score<50)\_Low Influencer : 38223 ,  
(score 50 -79)\_Medium Influencer : 20554 , (score>80)\_High Influencer 14809
25. influencer Sentiments For Brand :  
  
Negative - (score<50)\_Low Influencer - 3472  
Negative - (score 50 -79)\_Medium Influencer -1827  
Negative - (score>80)\_High Influencer -1244  
  
Neutral -(score<50)\_Low Influencer -8201  
Neutral- (score 50 -79)\_Medium Influencer -4487  
Neutral - (score>80)\_High Influencer -3157  
  
Positive -(score<50)\_Low Influencer -7748  
Positive - (score 50 -79)\_Medium Influencer -4436  
Positive - (score>80)\_High Influencer -3201

## 26.influencer sentiment For the compititor :

Negative -(score<50)\_Low Influencer -3329  
Negative - (score 50 -79)\_Medium Influencer -2069  
Negative - (score>80)\_High Influencer -1377

Neutral -(score<50)\_Low Influencer -7973  
Neutral -(score 50 -79)\_Medium Influencer -4268  
Neutral -(score>80)\_High Influencer -3145

Positive -(score<50)\_Low Influencer -7693  
Positive - (score 50 -79)\_Medium Influencer -4171  
Positive - (score>80)\_High Influencer -2845

## 27.Correlation Between UserFollowers and Sentiment :

High (10K+)	Positive	27395
High (10K+)	Neutral	27056
High (10K+)	Negative	12148
Low (0-999)	Neutral	408
Low (0-999)	Positive	195
Low (0-999)	Negative	132
Medium (1K-10K)	Positive	2589
Medium (1K-10K)	Neutral	2560
Medium (1K-10K)	Negative	1103

## 28.sentiments of the heighest followers customers towards Brand :

High (10K+)	Neutral	14217
High (10K+)	Positive	14127
High (10K+)	Negative	5883
Low (0-999)	Neutral	193
Low (0-999)	Negative	112
Low (0-999)	Positive	34
Medium (1K-10K)	Neutral	1435
Medium (1K-10K)	Positive	1224
Medium (1K-10K)	Negative	548

29.sentiments of the heighest followers customers towards Compititor :

Medium (1K-10K)	Neutral	1265
Medium (1K-10K)	Positive	1217
Medium (1K-10K)	Negative	535
Low (0-999)	Neutral	216
Low (0-999)	Positive	117
Low (0-999)	Negative	28
High (10K+)	Neutral	13905
High (10K+)	Positive	13375
High (10K+)	Negative	6212

30.Total Purchased Product : 73586    Total recalled Product : 37459    Recalled Rate : 50.905 %

31.Year Wise Recalled Product : 2021 - 12361 , 2022 - 12142 , 2023- 12956

32.Product wise recalled rate :

Smartwatch	53.43502
Tablet	51.89887
Smartphone	49.45758
Laptop	49.21903

33.Response Time : Min : 0 days , Max : 715 days , Avg : 189 days

34.Response Time Range :

0-2 Days_Fast_Response	341
3-5 Days_Moderate_Response	229
6-10 Days_Slow_Response	454
More than 10 Days_Very_slow_Response	12359
No Response	60203

35.Response Time Sentiment :

0-2 Days_Fast_Response	Negative	341
3-5 Days_Moderate_Response	Negative	229
6-10 Days_Slow_Response	Negative	454
More than 10 Days_Very_slow_Response	Negative	12359

### 36.How Many Complaints Resolved :

No Status - 60203 , Unresolved - 7014 , Resolved- 6369

37.Resolution Rate : 8.66 %

### 38.Customer Satisfaction (NPS :Net Pramoter Score ) Analysis :

Promoters (9 or 10) – Typically loyal and enthusiastic customers.

Passives (7 or 8 ) – They are satisfied with your service but not happy enough to be considered promoters.

Detractors (0-6) – Customers who have had a negative experience with your company

Detractor(0-6) : 47528

Promoter(9-10) : 13508

Passive(7-8) : 12550

### 39.Relationship Between Sentiment and NPS :

Negative Detractor(0-6) 8621

Negative Promoter(9-10) 2684

Negative Passive(7-8) 2078

Neutral Detractor(0-6) 19492

Neutral Promoter(9-10) 5321

Neutral Passive(7-8) 5211

Positive Detractor(0-6) 19415

Positive Promoter(9-10) 5503

Positive Passive(7-8) 5261

### 40.compititor Analysis :

MarsTech 19517

MetaTech 18309

SmartTech 17949

### 41.compititor And Avg NPS Score :

MetaTech - 4.9500 SmartTech-4.9575 MarsTech-4.9713



#### 42.Sentiment Count were Brand Mention :

Negative Detractor(0-6) 4204  
Negative Promoter(9-10) 1306  
Negative Passive(7-8) 1033  
Neutral Detractor(0-6) 10201  
Neutral Promoter(9-10) 2834  
Neutral Passive(7-8) 2810  
Positive Detractor(0-6) 9868  
Positive Promoter(9-10) 3076  
Positive Passive(7-8) 2441

#### 43.Compititor And Sentiments :

MarsTech	Positive	8000
MarsTech	Neutral	7913
MarsTech	Negative	3604
MetaTech	Positive	7517
MetaTech	Neutral	7498
MetaTech	Negative	3294
SmartTech	Positive	7453
SmartTech	Neutral	7275
SmartTech	Negative	3221

#### 44.Centiments were brand mention:

Neutral -15845 , Positive -15385 , Negative - 6543

#### 45.Year wise Sentiments were Brand Mention :

year	positive	negative	Neutral
2021	5163	2239	5325
2022	4945	2019	5009
2023	5277	2285	5511