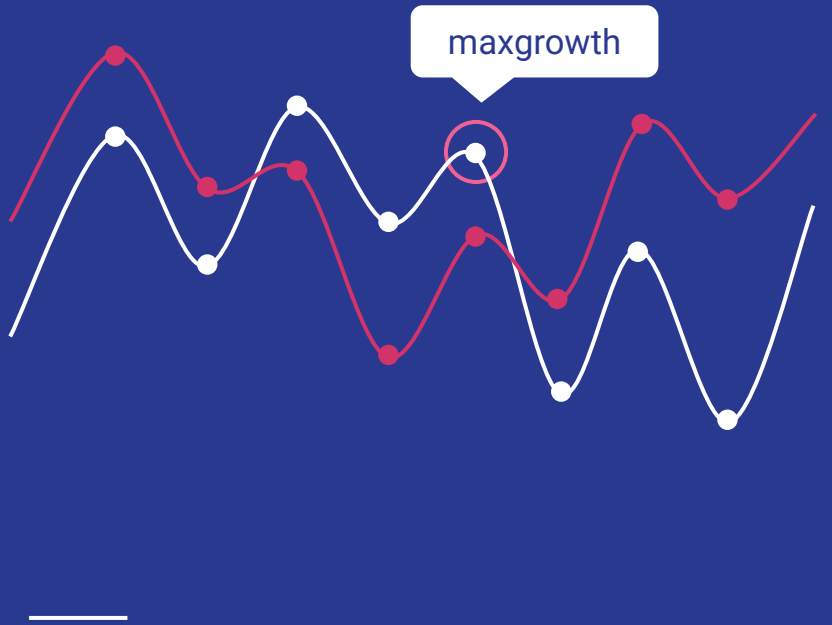
Funnel & Digital Analytics

By Prof.Vishal Chugh



What is Funnel Analytics ?

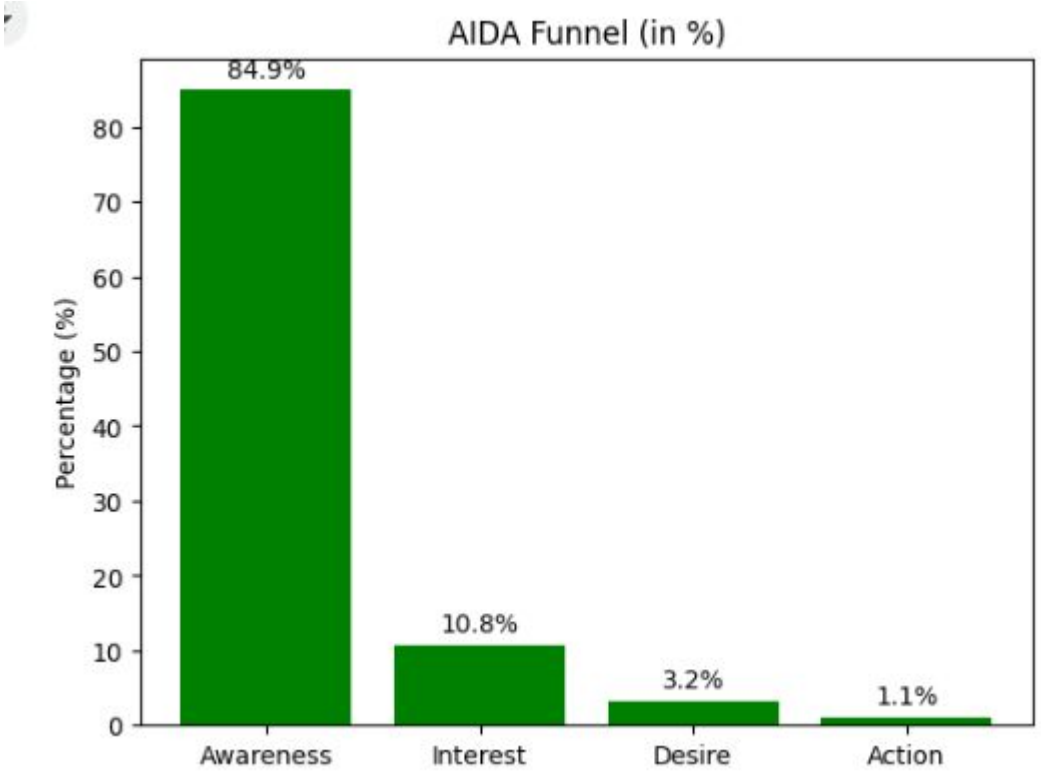
Funnel analytics is a method used to understand the journey of a user or customer through various stages before completing a desired action (like a purchase or sign-up)

How to Create a Sales Funnel and Email Campaign For Free

Python Funnel Code

```
funnel = {'Awareness': digital['awareness'].sum(), 'Interest': digital['interest'].sum(), 'Desire': digital['desire'].sum(), 'Action': digital['action'].sum()}

# Calculate percentages
total = sum(funnel.values())
percentages = [value / total * 100 for value in funnel.values()]

# Plot bar chart
bars = plt.bar(funnel.keys(), percentages, color='green')
plt.title('AIDA Funnel (in %)')
plt.ylabel('Percentage (%)')

# Add percentage labels directly
plt.bar_label(bars, labels=[f"{p:.1f}%" for p in percentages], padding=3)

plt.show()
```

AIDA


AIDA Funnel (in %)
Percentage (%)
0
10
20
30
40
50
60
70
80
84.9%
10.8%
3.2%
1.1%
Awareness
Interest
Desire
Action

What is Digital Analytics ?

Digital analytics is the process of collecting, measuring, analyzing, and interpreting data from digital platforms to understand user behavior, improve customer experiences, and make data-driven decisions to enhance business performance and achieve goals.

Areas of Digital Analytics

Website Traffic

These are quantifiable data points that measure the performance of a website.

Social Media

These include both quantitative and qualitative data used to measure the performance of contect, campaigns and ads

Email Marketing

It refers to the process of measuring, tracking and analyzing the performance of email campaigns to understand customer engagement, improve communication strategies and maximize ROI

Metrics in Website Traffic

1. Sessions
2. Bounce Rate
3. Click Through Rate (CTR)

What is a Session ?

A session in website refers to the period of time a user actively engaged with your website. It begins when a user lands on your site and ends after a period of inactivity or when the user leaves.

Mean Session Duration

```
# mean sessions duration
mean_duration = digital['session_duration_sec'].mean()
print('The mean duration of the sessions is', round(mean_duration,2))
```

```
The mean duration of the sessions is 95.9
```

Highest Session Duration

```
# Highest Session Duration
high_duration = digital['session_duration_sec'].max()
print('The highest duration of the sessions is', round(high_duration,2))
```

```
The highest duration of the sessions is 1921
```

Lowest Session Duration

```
# Lowest Session Duration
lowest_duration = digital['session_duration_sec'].min()
print('The lowest duration of the sessions is', round(lowest_duration,2))
```

```
The lowest duration of the sessions is 1
```

What is a Bounce Rate ?

Bounce Rate is the percentage of visitors who land on a webpage and then leave without taking any further action, such as clicking on a link, filling out a form or visiting another page

Bonus Rate

```
# Bounce Rate
single_page_sessions = digital[digital['pageviews'] == 1].shape[0]
total_sessions = digital.shape[0]
bounce_rate = (single_page_sessions / total_sessions) * 100
print('The bounce rate is', round(bounce_rate,2), '%')
```

```
The bounce rate is 10.85 %
```

What is a Click Through Rate (CTR) ?

CTR is a percentage that measures how often people click on a link ad, or call-to-action (CTA) after seeing it.

Click Through Rate

```
# Click Through Rate
number_of_clicks = digital['ad_clicks'].sum()
number_of_impressions = digital['ad_impressions'].sum()
click_through_rate = (number_of_clicks / number_of_impressions) * 100
print('The click through rate is', round(click_through_rate,2), '%')
```

```
The click through rate is 4.51 %
```

Metrics in Social Media

1. User Engagement
2. Impressions
3. Reach
4. Virality
5. Sentiments

What is User Engagement ?

It refers to how users interact with your content on digital platforms, especially social media

User Engagement

```
# User Engagement
total_engagement = digital['social_likes'].sum() + digital['social_comments'].sum() + digital['social_shares'].sum()
social_reach = digital['social_reach'].sum()
user_engagement = (total_engagement / social_reach) * 100
print('The user engagement is', round(user_engagement,2), '%')
```

```
The user engagement is 6.44 %
```

What is Impressions ?

It refers to the total number of times your content is displayed on a user's screen-regardless of whether it was clicked or not

Impressions Based on Users and Device

```
# Impressions based on users and device
digital['total_impressions'] = digital['social_impressions'].sum() + digital['ad_impressions'].sum()
impression_device = digital.groupby(['user_id', 'device'])['total_impressions'].sum().sort_values(ascending = False)
impression_device.head()
```

		total_impressions
user_id	device	
user_26026	Mobile	101305267
user_5802	Mobile	101305267
user_61440	Mobile	101305267
user_10560	Desktop	101305267
user_65264	Mobile	86833086

What is Reach ?

It refers to the total number of unique users who have seen your content on social media or any digital platform

Reach

```
# Reach
reach = digital.groupby(['channel', 'device'])['user_id'].nunique().sort_values(ascending = False)
print(reach)
```

```
channel      device
Organic      Mobile     13420
             Desktop    12379
Social       Mobile      9348
Paid Search  Mobile      9259
Social       Desktop     8509
Paid Search  Desktop     8420
Direct       Mobile      7203
             Desktop     6539
Email        Mobile      4779
             Desktop     4363
Referral     Mobile      2387
             Desktop     2169
Organic      Tablet      1440
Social       Tablet       996
Paid Search  Tablet       954
Direct       Tablet       768
Email        Tablet       500
Referral     Tablet       260
```

What is a Virality ?

It refers to the tendency of content (such as videos, images, articles or memes) to be circulated rapidly and widely from one internet user to another.

Virality

```
# Virality
avg_social_shares = digital['social_shares'].mean()
total_users = digital['user_id'].nunique()
conversion_rate = (digital['action'] == 1).sum()/total_users
Virality = avg_social_shares * conversion_rate
print('The virality is', round(Virality,2))
```

```
The virality is 0.01
```

K < 1 : - Content Not Viral

K = 1 : Stable Growth

K > 1 : Viral Content

What are Sentiments ?

It is the computational process of identifying, extracting and classifying the emotional tone behind words, often to determine whether the sentiment is positive, negative or neutral.

Sentiments

```
# Sentiment
sentiment_counts = digital['sentiment_label'].value_counts(normalize =  True) * 100
sentiment_counts
```

sentiment_label	proportion
neutral	85.846
positive	9.244
negative	4.910

Metrics in Email Marketing

1. Open Rate
2. Click Through Rate (CTR)
3. Unsubscribe Rate

What is Open Rate ?

It measures the percentage of email recipients who open your email

Email Open Rate

```
# Open Rate
email_open_rate = digital['email_opens'].sum()/digital['email_sent'].sum() * 100
print('The open rate is', round(email_open_rate,2), '%')
```

```
The open rate is 24.49 %
```

What is Click Through Rate (CTR) ?

It measures the percentage of recipients who clicked on one or more links in your email

Email Click Through Rate

```
# Open Rate
email_open_rate = digital['email_opens'].sum()/digital['email_sent'].sum() * 100
print('The open rate is', round(email_open_rate,2), '%')
```

```
The open rate is 24.49 %
```

What is Unsubscribe Rate?

It indicates the percentage of recipients who opted out of receiving future emails after receiving a specific campaign

Email Unsubscribe Rate

```
# Unsubscribe Rate
unsubscribe_rate = digital['email_unsubscribes'].sum()/digital['email_sent'].sum() * 100
print('The unsubscribe rate is', round(unsubscribe_rate,2), '%')
```

```
The unsubscribe rate is 0.25 %
```

App Analytics

1. App Usage Rate

2. Push Rate

What is App Usage Rate ?

It measures the percentage of apps users out of the complete users data

App Usage Rate

```
# App Usage Rate
app_usage_rate = digital['app_user'].sum()/digital['user_id'].nunique() * 100
print('The App usege rate is', round(app_usage_rate,2))
```

```
The App usege rate is 7.54
```

What is Push Rate ?

It measures the percentage of push clicks out of the total push notifications sent

App Push Rate

```
# Push Rate
push_rate = digital['push_clicks'].sum()/digital['push_sent'].sum() * 100
print("The push rate is", round(push_rate,2))
```

```
The push rate is 3.31
```

Thank You

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