

8WEEKSQLCHALLENGE.COM

CASE STUDY # 6

01/22



CliqueBait ATTENTION CAPTURING

SWIPE



DATAWITHDANNY.COM

PROJECT OVERVIEW

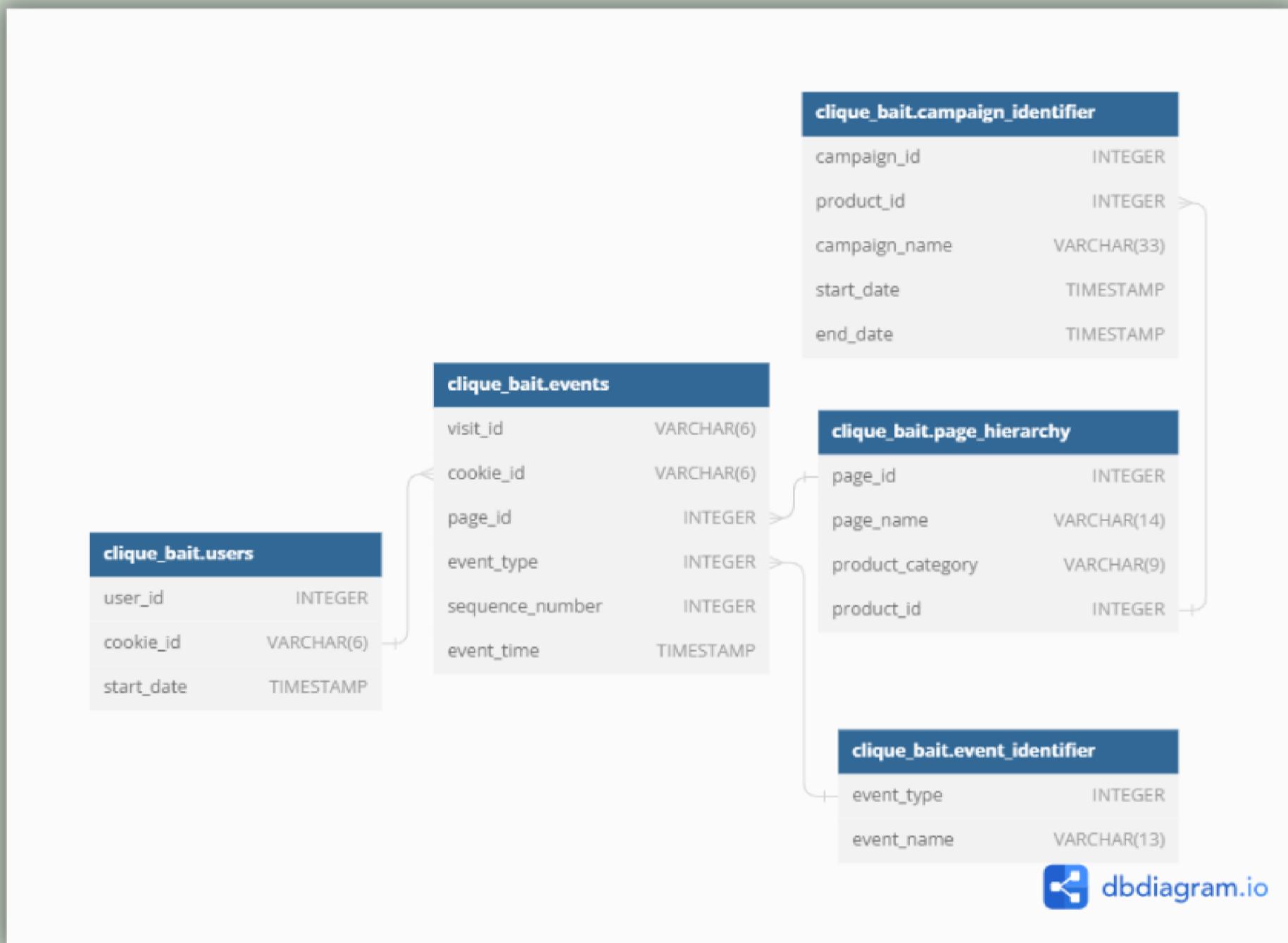
This SQL project aims to support Danny, the founder and CEO of Clique Bait, an online seafood store, in analyzing his dataset and providing valuable insights to enhance the business and devise innovative solutions to calculate funnel fallout rates for the store.

TASK

- DIGITAL ANALYSIS
- PRODUCT FUNNEL ANALYSIS
- CAMPAIGNS PERFORMANCE ANALYSIS
- TEMPORAL ANALYSIS
- USER BEHAVIOR ANALYSIS

KEEP SWIPIING 

ER DIAGRAM



KEEP SWIPIING →

DIGITAL ANALYSIS

PROBLEM STATEMENT 01:

Your task is to determine the number of unique users who accessed the website.

SOLUTION:

```
select count(distinct user_id) from users;
```

This analysis serves as a foundation for various other analyses that the Digital Analytics team aims to perform to understand the digital engagement on the platform better.

KEEP SWIPIING 

DIGITAL ANALYSIS

PROBLEM STATEMENT 02:

Your task is to calculate the average number of cookies all users have on the platform.

SOLUTION:

```
with cte as(  
    select user_id, count(cookie_id) as cc from users  
    group by user_id  
)  
select round(avg(cc)) average_cookies_per_user  
from cte ;
```

This analysis provides insights into the data footprint per user and will be instrumental for the data management policies.

KEEP SWIPIING →

DIGITAL ANALYSIS

PROBLEM STATEMENT 03:

Your role is to derive the unique number of visits by all users for each month.

SOLUTION:

```
select month(event_time) Month,  
       count(distinct visit_id) unique_visit_count  
  from events  
 where event_type=1  
 group by Month;
```

This analysis reveals how users behave on our platform, guiding decisions for ads, website improvements, and inventory management.

KEEP SWIPIING 

DIGITAL ANALYSIS

PROBLEM STATEMENT 04:

Your task is to calculate the number of events for each event type.

SOLUTION:

```
select ef.event_name, count(e.visit_id) event_count  
from events e inner join event_identifier ef  
on e.event_type=ef.event_type  
group by 1;
```

This analysis provides a comprehensive view of the distribution of different types of interactions on the platform, aiding in various strategic decisions across departments.

KEEP SWIPIING 

DIGITAL ANALYSIS

PROBLEM STATEMENT 05:

Your task is to determine the percentage of visits that view the checkout page but do not have a purchase event.

SOLUTION:

```
with cte as
(
  select
    sum(case when event_type= 1 and page_id=12 then 1 else 0 end) as checkout,
    sum(case when event_type= 3 then 1 else 0 end) as purchase
  from events
)
select
  (1-purchase/checkout)*100 as percentage_checkout_view_with_no_purchase
from cte;
```

This analysis helps in understanding user behavior at a crucial stage in the purchase funnel and will be instrumental in devising strategies to improve the conversion rate.

KEEP SWIPIING 

DIGITAL ANALYSIS

PROBLEM STATEMENT 06:

You are entrusted with the task of identifying the top 3 pages on the platform that have garnered the most views.

SOLUTION:

```
select ph.page_name, count(*)  
from events e inner join page_hierarchy ph  
on e.page_id=ph.page_id  
where e.event_type=1  
and ph.product_id is not null  
group by ph.page_name  
order by count(*) desc limit 3;
```

This information will help them figure out how to redesign the platform better.

KEEP SWIPIING 

DIGITAL ANALYSIS

PROBLEM STATEMENT 07:

Your task is to analyze the number of views and cart adds for each product category.

SOLUTION:

```
select ph.product_category,  
sum(case when e.event_type=1 then 1 else 0 end) page_views,  
sum(case when e.event_type=2 then 1 else 0 end) cart_add  
from events e inner join page_hierarchy ph  
on e.page_id=ph.page_id  
where ph.product_id is not null  
group by 1 order by 1 desc;
```

This analysis will aid the Inventory Manager in making informed decisions for managing the inventory & the Marketing team in strategizing the upcoming campaigns.

KEEP SWIPIING 

DIGITAL ANALYSIS

PROBLEM STATEMENT 08:

What is the percentage of visits which have a purchase event?

SOLUTION:

```
97 • ⏪ select round(sum(case when event_type="3" then  
98   1 else 0 end)/count(distinct visit_id),3)*100 as purchase_percentage  
99   from events;
```

result Grid | Filter Rows: _____ | Export: | Wrap Cell Content:

purchase_percentage
49.900

This analysis provides actionable insights for improving the platform's conversion rate and, consequently, its overall performance in attracting and retaining customers.

KEEP SWIPIING 

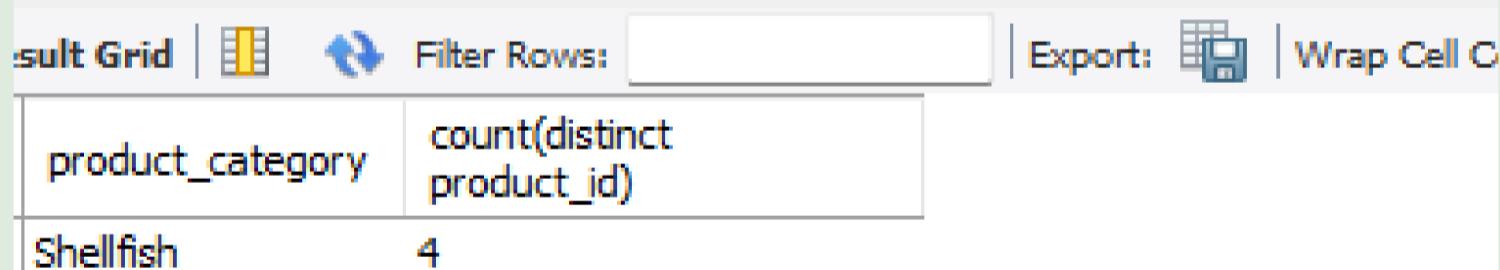
PRODUCT_FUNNEL_ANALYSIS

PROBLEM STATEMENT 09:

Your task is to identify the product category that hosts the maximum number of products.

SOLUTION:

```
08 •   select product_category, count(distinct product_id)
09     from page_hierarchy
10    where product_category is not null
11    group by product_category
12    order by 2 desc limit 1;
```



The screenshot shows a database query results grid. At the top, there are buttons for 'Result Grid' (selected), 'Filter Rows', and 'Export'. Below the grid, there is a summary row and a single data row.

product_category	count(distinct product_id)
Shellfish	4

This analysis serve as a precursor for the team's market analysis and strategy formulation.

KEEP SWIPIING 

PRODUCT_FUNNEL_ANALYSIS

PROBLEM STATEMENT 10:

Your task is to analyze user behavior concerning product views and purchases.

SOLUTION:

```
select u.user_id,  
sum(case when e.event_type=1 then 1 else 0 end) product_views,  
sum(case when e.event_type=3 then 1 else 0 end) purchase  
from events e inner join users u  
on e.cookie_id=u.cookie_id  
group by 1;
```

This analysis serves as a cornerstone for the Product Recommendation Team to fine-tune the recommendation engine and for the Marketing Team to devise strategies to boost the visibility of lesser-viewed products.

KEEP SWIPIING 

PRODUCT_FUNNEL_ANALYSIS

PROBLEM STATEMENT 11:

Your task is to identify the most viewed and least viewed product on the website.

SOLUTION:

```
select ph.page_name, ph.product_category, count(*) views  
from events e inner join page_hierarchy ph  
on e.page_id=ph.page_id  
where e.event_type=1  
and ph.product_id is not null  
group by 1,2  
order by 3 desc limit 1;
```

```
select ph.page_name, ph.product_category, count(*) views  
from events e inner join page_hierarchy ph  
on e.page_id=ph.page_id  
where e.event_type=1  
and ph.product_id is not null  
group by 1,2  
order by 3 asc limit 1;
```

This analysis plays a pivotal role in understanding user preferences and planning marketing strategies accordingly.

KEEP SWIPING →

CAMPAIGNS_PERFORMANCE_ANALYSIS

PROBLEM STATEMENT 12:

Your task is to identify the number of page views each campaign generated.

SOLUTION:

```
select pci.campaign_name, count(e.visit_id) page_views  
from events e inner join page_hierarchy ph  
on e.page_id=ph.page_id  
inner join campaign_identifier pci  
on pci.product_id=ph.product_id  
where e.event_type=1  
group by pci.campaign_name  
order by 2 desc;
```

This analysis helps the marketing team in understanding the impressions generated through their campaigns and in strategizing the future campaigns more effectively.

KEEP SWIPIING 

CAMPAIGNS_PERFORMANCE_ANALYSIS

PROBLEM STATEMENT 13:

Your task is to calculate the total number of unique visits for each campaign.

SOLUTION:

```
select pci.campaign_name,  
       count(distinct e.cookie_id) unique_visitors  
  from events e inner join page_hierarchy ph  
  on e.page_id=ph.page_id  
 inner join campaign_identifier pci  
  on pci.product_id=ph.product_id  
 group by pci.campaign_name;
```

This analysis helps the Campaign Management Team in understanding the reach and effectiveness of each campaign.

KEEP SWIPIING 

TEMPORAL_ANALYSIS

PROBLEM STATEMENT 14:

Your task is to calculate the number of events recorded on each day in the "events" table.

SOLUTION:

```
select date(event_time) event_date,  
       count(visit_id) total_events  
  from events group by 1;
```

This initial analysis helps in understanding the distribution of user interactions over different days, paving the way for a deeper dive into temporal patterns of user behavior.

KEEP SWIPIING 

TEMPORAL ANALYSIS

PROBLEM STATEMENT 15:

Your task is to calculate the total number of Ad Impression and Ad Click generated by all users per month.

SOLUTION:

```
select month(event_time) as "Month" ,  
sum(case when event_type=4 then 1 else 0 end) as Ad_Impression_Count,  
sum(case when event_type=5 then 1 else 0 end) as Ad_Click_Count  
from events  
group by month(event_time) order by 1;
```

This analysis helps The Marketing Team to strategically refine top-performing ads, CTR and identify user engagement patterns optimizing the impact of advertising campaigns.

KEEP SWIPIING 

USER_BEHAVIOR_ANALYSIS

PROBLEM STATEMENT 16:

Your task is to determine the number of sessions each user had on the website.

SOLUTION:

```
select user_id,  
       count(distinct visit_id) session_count  
  from users u inner join events e  
  on u.cookie_id=e.cookie_id  
 group by 1 order by 2 desc;
```

This analysis provide a lens into the user engagement on the platform and will be instrumental in strategizing user engagement initiatives.

KEEP SWIPIING 

USER_BEHAVIOR_ANALYSIS

PROBLEM STATEMENT 17:

Your task is to identify the number of users who have made a purchase and order them in descending order based on their order counts.

SOLUTION:

```
select user_id,count(visit_id) no_of_time_purchase  
from users u inner join events e  
on u.cookie_id=e.cookie_id  
where event_type=3  
group by 1 order by 2 desc;
```

This analysis will be pivotal in designing the loyalty rewards program.

KEEP SWIPING 

USER_BEHAVIOR_ANALYSIS

PROBLEM STATEMENT 18:

Your task is to analyze the user behavior in terms of visiting the pages and identifying the page that each user visits the most.

SOLUTION:

```
with cte as(
    select u.user_id,ph.page_name,count(*),
    dense_rank() over(partition by u.user_id order by count(*) desc) as k
    from users u inner join events e on u.cookie_id=e.cookie_id
    inner join page_hierarchy ph on e.page_id=ph.page_id
    where ph.product_id is not null
    group by 1,2
)
select * from cte where k=1;
```

This analysis will serve as a foundation for the UX team to devise strategies for enhancing user engagement on the platform.

ONE MORE →

CONCLUSION

Through comprehensive data analysis and innovative solutions, this case study aims to empower Clique Bait with actionable insights. By focusing on funnel fallout rates and addressing key areas of improvement, the goal is to enhance the overall performance of the online seafood store, fostering growth, and delivering an exceptional experience for Clique Bait's customers.

THANK YOU