

## Introduction

Analyzing user behavior on web platforms is essential in today's digital landscape for developing effective business strategies and enhancing the overall user experience. Web analytics enables the collection, analysis, and interpretation of web data to optimize website performance and improve user engagement. This project aims to implement an efficient web analytics solution by integrating a website with Google Tag Manager (GTM).

Google Tag Manager is a powerful tool developed by Google that simplifies the process of deploying and managing tracking codes, or "tags," on a website without direct access to the site's underlying code. By using GTM, we can seamlessly integrate Google Analytics (GA) and other third-party tags to monitor key metrics such as page views, bounce rates, session durations, and conversion rates.

This project will focus on the following:

- Setting up the Global Site Tag and configuring the GTM container to function optimally for the website.
- Implementing essential tracking tags, including Google Analytics, event tracking, and conversion tracking, to monitor key performance indicators (KPIs).
- Customizing tags to track user interactions such as scroll depth, search, and outbound link clicks.
- Ensuring compliance with privacy regulations, including General Data Protection Regulation(GDPR) and California Consumer Privacy Act (CCPA), by managing cookie consent and data anonymization within GTM.
- Analyzing the collected data to derive actionable insights for enhancing website functionality, user experience, and business outcomes.

## Objective

The objective of this project is to implement a comprehensive web analytics system using Google Tag Manager (GTM) to track and analyse user behaviour on a website. The aim is to enhance website performance, improve user experience, and drive business outcomes by:

- Integrating Google Tag Manager to efficiently manage and deploy tracking tags.
- Setting up tracking for essential website metrics such as page views, bounce rates, and conversion rates.
- Collecting and analysing user interaction data to derive actionable insights for website optimization.

## Project-Scope

The scope of this project encompasses the complete implementation of a web analytics solution through Google Tag Manager (GTM), with a focus on improving website performance and user experience. The project will cover the following key areas:

### 1. Integration of Google Tag Manager (GTM):

- o Configuring the GTM container and deploying the Global Site Tag to the website.
- o Ensuring compatibility with Google Analytics (GA) and other third-party tags.

### 2. Tracking Implementation:

- o Setting up basic and advanced tracking tags, including page views, event tracking, and conversion goals.
- o Implementing custom tags to capture detailed user interactions such as form submissions, scroll depth, video views, and outbound link clicks.

### 3. Data Collection and Reporting:

- o Capturing and analyzing key metrics such as bounce rates, session durations, and conversion rates.
- o Creating reports in GA and GTM dashboards for ongoing monitoring and performance evaluation.

### 4. Privacy Compliance:

- o Ensuring that the tracking implementation complies with privacy regulations, specifically GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act).
- o Incorporating features to manage cookie consent and anonymize user data where necessary.

### 5. Data Analysis and Insights:

- o Analysing user behaviour data to uncover actionable insights aimed at improving website performance and user engagement.
- o Identifying areas for improvement, such as optimizing page load times, enhancing content layout, or refining call-to-action (CTA) placements.

## Technologies Used

### 1. Google Tag Manager (GTM):

GTM is the primary tool for managing and deploying tracking tags without direct access to the website's source code. It simplifies the process of integrating various analytics and marketing tools, providing flexibility and control over what is tracked on the website.

### 2. Google Analytics (GA):

Google Analytics is used to monitor website traffic and user behaviour. It allows tracking of key metrics such as page views, bounce rates, session duration, and conversion goals, offering insights into how visitors interact with the website.

### 3. Google Sheets / Excel:

Spreadsheet tools are used for organizing, exporting, and further analysing data collected through GTM and GA. Data may be exported for deeper analysis or for presentation purposes.

### 4. Looker Studio (formerly Google Data Studio):

Looker Studio is used to visualize data collected from Google Analytics and other sources. It enables the creation of interactive, customizable reports and dashboards that present data insights in a clear, accessible manner for stakeholders and decision-makers.

### 5. WordPress:

WordPress is the content management system (CMS) used to manage the website in this project. GTM and GA are easily integrated with WordPress using plugins or manual code insertion, enabling seamless tracking of user behaviour and website performance without requiring extensive technical knowledge.

## Google Analytics Setups

### Setup the google analytics Account

The screenshot shows the Google Analytics interface for account setup. On the left, a sidebar menu includes 'Admin', 'My preferences', 'Setup Assistant', 'Account settings' (expanded), 'Account' (selected), 'Property settings' (expanded), and 'Property'. Under 'Account' in the main area, 'Account details' is selected, showing fields for 'Basic Settings' (Account Id: 329896750, Account Name: Srushti, Country of Business: India), 'Data Sharing Settings' (checkbox checked for 'Google products & services'), and 'Google products & services' (checkbox checked). Below this is the 'Data streams' section, which lists a single stream: 'srushti10' (https://dev-srushti10.pantheonsite.io/), '9715368612', and 'Receiving traffic in past 48 hours'. A blue 'Add stream' button is visible.

## The google tag manager code

The screenshot shows the Google Tag Manager 'Installation instructions' page. It features two tabs: 'Install with a website builder or CMS' (selected) and 'Install manually'. Below the tabs, a note says: 'Below is the Google tag for this account. Copy and paste it in the code of every page of your website, immediately after the <head> element. Don't add more than one Google tag to each page.' A code block contains the following script:

```

<!-- Google tag (gtag.js) -->
<script async src="https://www.googletagmanager.com/gtag/js?id=G-1TBQ8TF3D4"></script>
<script>
  window.dataLayer = window.dataLayer || [];
  function gtag(){dataLayer.push(arguments);}
  gtag('js', new Date());

  gtag('config', 'G-1TBQ8TF3D4');
</script>

```

Below the code, there's a 'Test your website (optional)' section with a URL input field containing 'https://dev-srushti10.pantheonsite.io/' and a 'Test' button. At the bottom, a section titled 'Use Google Tag Manager?' explains: 'For additional features including multiple tag management and enterprise workflows, install and manage with Google Tag Manager.' It also includes a link: 'Learn more about Google Tag Manager'.

Now create a website using word press

SITE NAME	CREATED	USER IN CHARGE	UPSTREAM	PLAN	STATUS
srushti10	September 19th, 2024	Srushti10 Fulpagar	WordPress	Sandbox	Active

Select any template

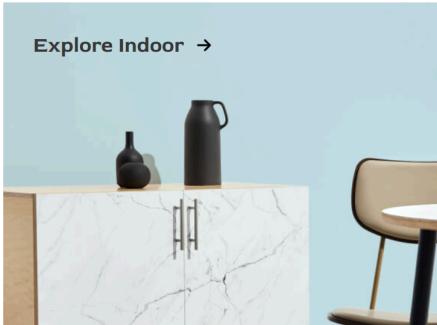
Crafted with Care  
for Memorable  
Moments.

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## New Arrivals



★★★★★  
Hanging Plant  
\$16.00



★★★★★  
Wooden Vases  
\$30.00



★★★★★  
Golden Lamps  
\$15.75



★★★★★  
Wooden Greenery  
\$26.00

[EXPLORE ALL PRODUCTS](#)

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## Follow @antiques

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**Free Shipping**  
Justo vestibulum risus imperdiet conse sectetur.



**30 Days Return**  
Justo vestibulum risus imperdiet conse sectetur.

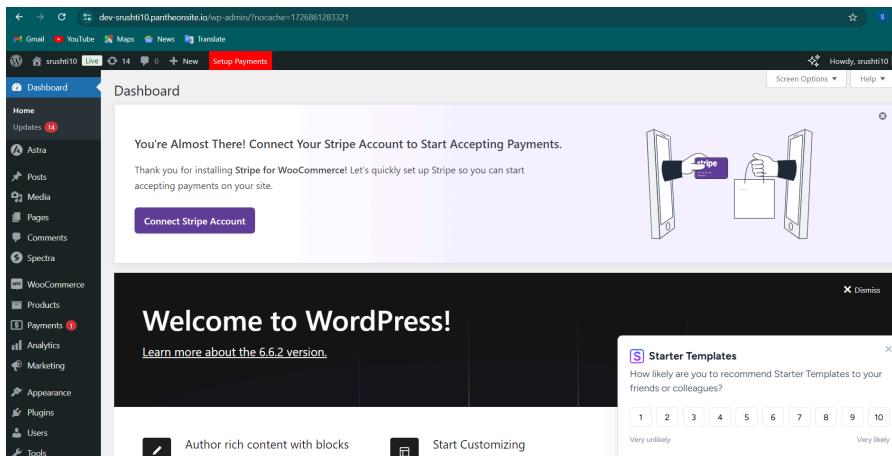
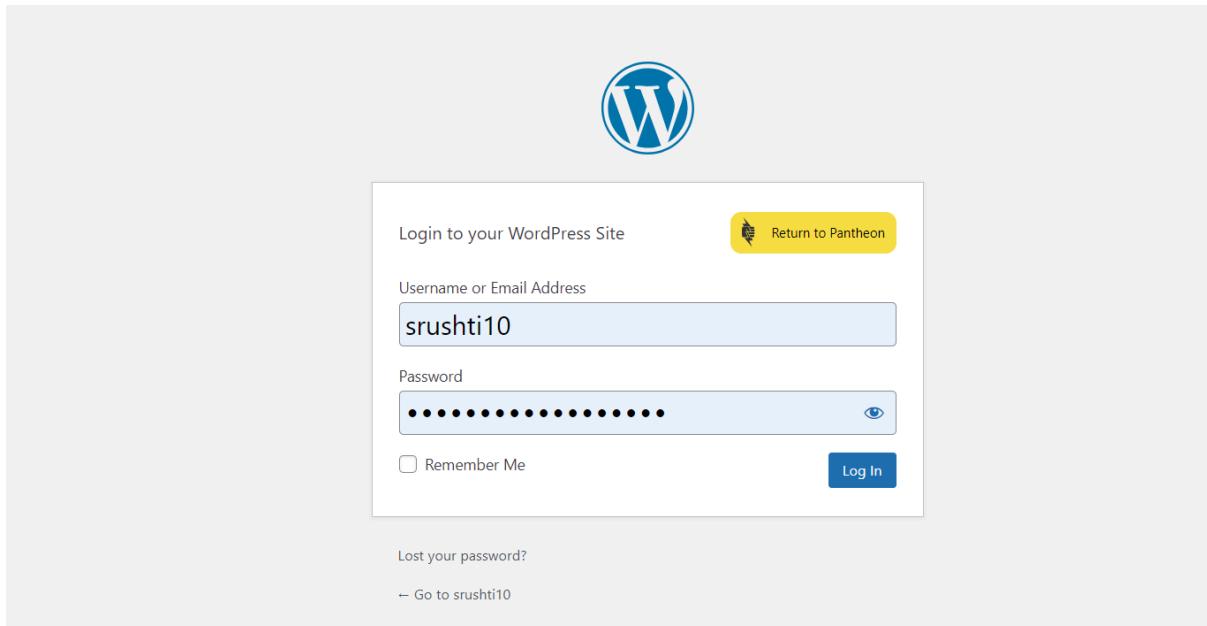


**Best Offers**  
Justo vestibulum risus imperdiet conse sectetur.

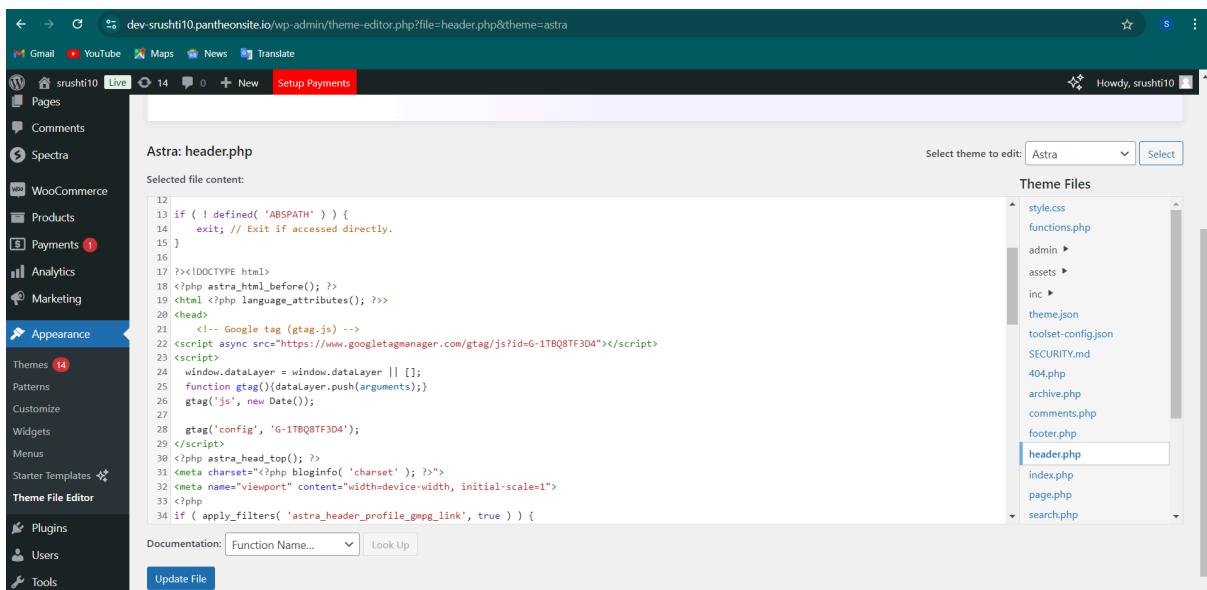


**Secure Payment**  
Justo vestibulum risus imperdiet conse sectetur.

Then Login into wordpress and go to dashboards



Now go to appearance ,select theme file editor click on header.php and paste the above copied code and save the file.



Then go to Google Tag Manager (GTM) and create an account.

The image consists of three vertically stacked screenshots of the Google Tag Manager web interface.

**Screenshot 1: Account Creation**

- The URL is [tagmanager.google.com/#/admin/accounts/create](https://tagmanager.google.com/#/admin/accounts/create).
- The title bar shows "Tag Manager".
- The "Admin" tab is selected in the top navigation.
- The main form is titled "Add a New Account".
- Account Setup:**
  - Account Name: "srushti10"
  - Country: "India"
  - Share data anonymously with Google and others
- Container Setup:**
  - Container name: "dev-srushti10.pantheonsite.io/"
  - Target platform: "Web" (For use on desktop and mobile web pages)

**Screenshot 2: Account List**

- The URL is [tagmanager.google.com/#/home](https://tagmanager.google.com/#/home).
- The title bar shows "Tag Manager".
- The "All accounts" dropdown is open.
- The "Accounts" tab is selected.
- A table lists the account "srushti10" with details:
 

Container Name	Container Type	Container ID
dev-srushti10.pantheonsite.io/	Web	GTM-T497NJKX

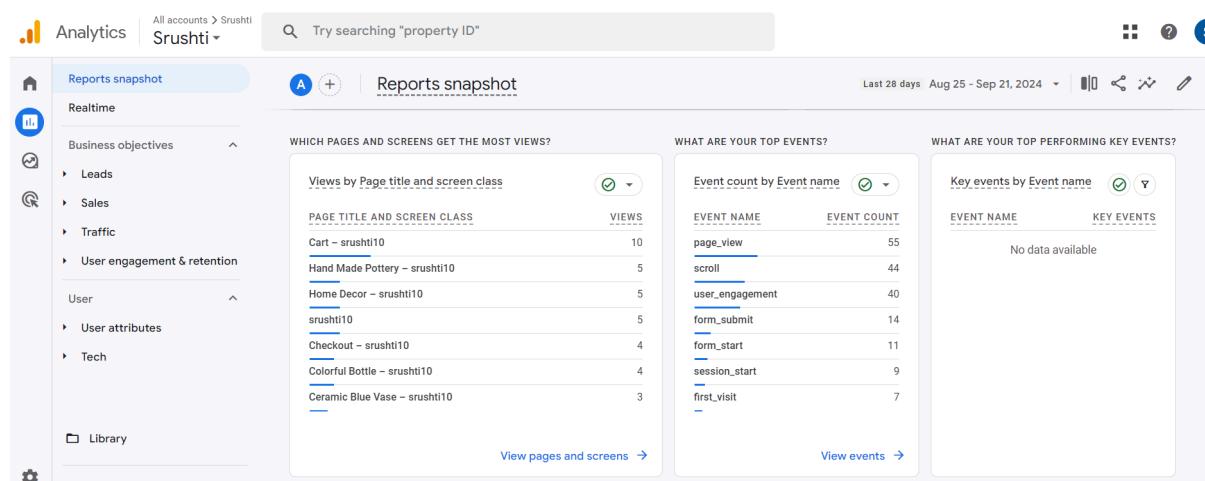
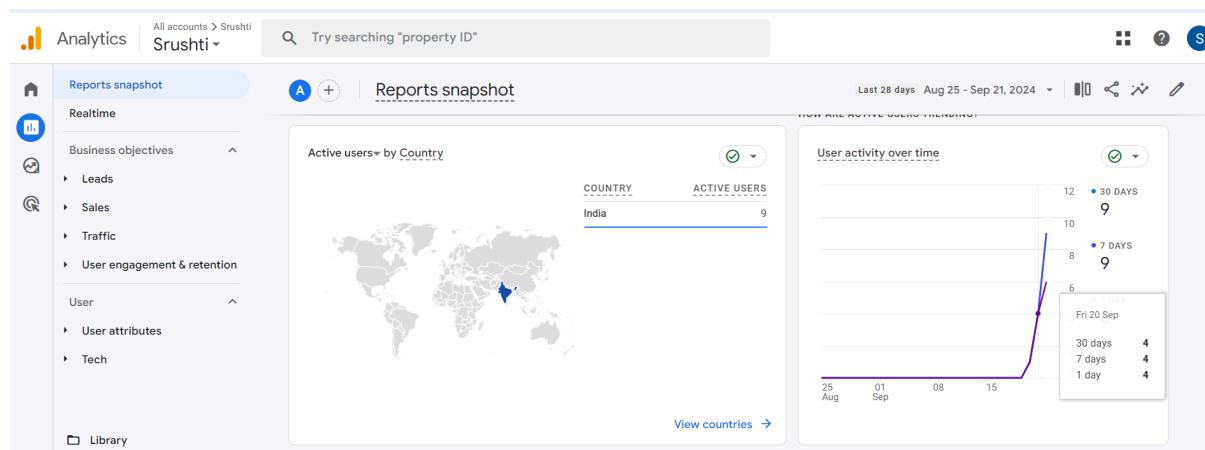
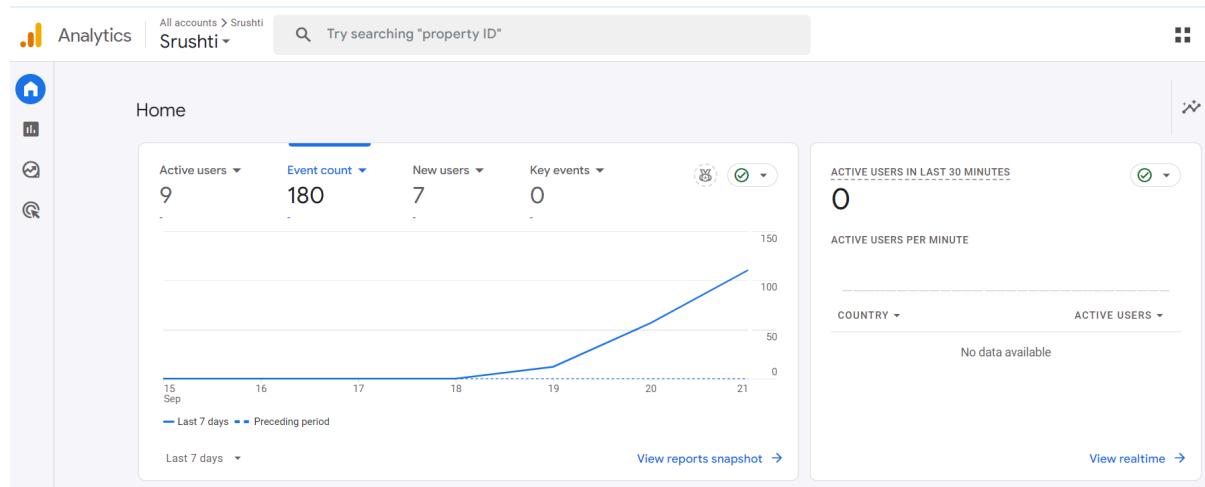
**Screenshot 3: Current Workspace**

- The URL is [tagmanager.google.com/#/workspace](https://tagmanager.google.com/#/workspace).
- The title bar shows "Tag Manager".
- The "Workspace" tab is selected.
- The current workspace is "Default Workspace".
- The container quality is "Excellent" with "No issues detected".
- The left sidebar shows "CURRENT WORKSPACE" with "Default Workspace" selected, and options for "Overview", "Tags", "Triggers", "Variables", "Folders", and "Templates".
- The main area shows:
  - "New Tag": "Choose from over 50 tag types" with a "Add a new tag" button.
  - "Now Editing": "Default Workspace" with workspace change statistics: 0 Modified, 0 Added, 0 Deleted.
  - "Description": "Edit description" button.
  - "Workspace Changes": "Manage workspaces" button.

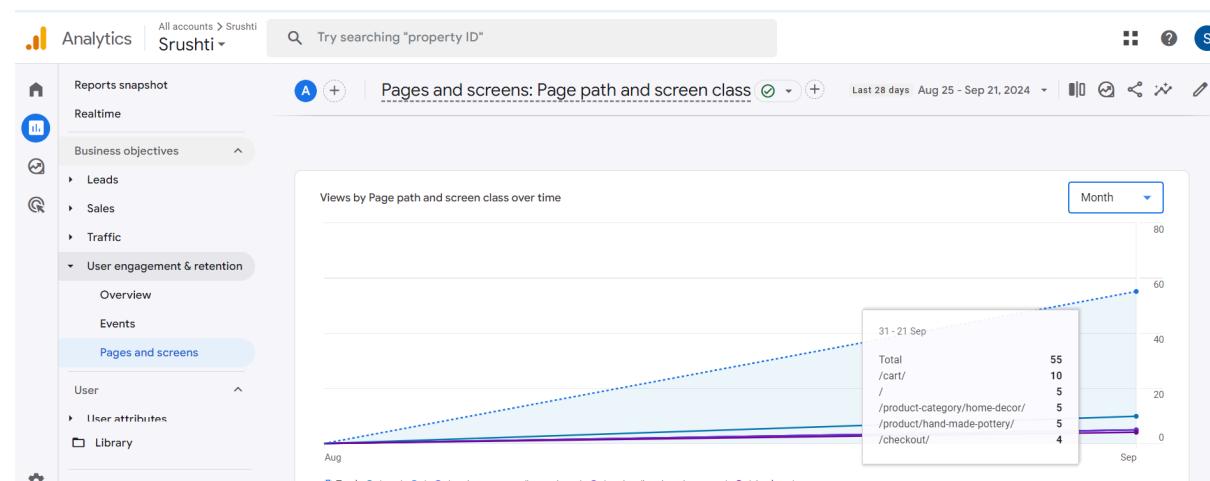
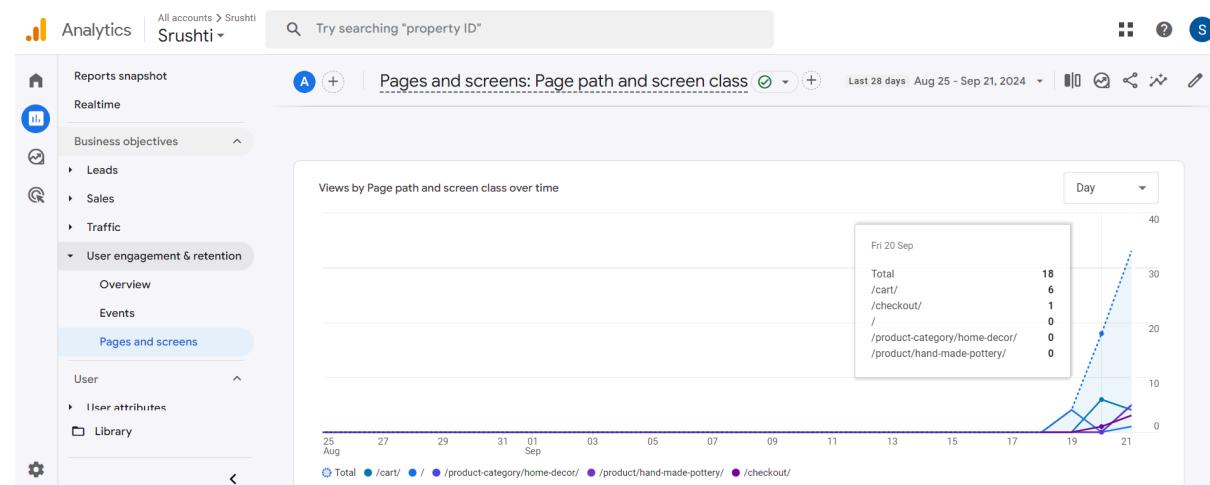
Then go to Google Tag Assistant and connect your website.

The screenshot shows the Google Tag Assistant interface. A central modal window titled "Connect Tag Assistant to your site" is displayed. It features a blue diamond icon representing "Tag Manager Preview Mode". Below the icon, text states: "Tag Manager container GTM-T497NJK will be put into debug mode in this web browser. Enter a URL to your site to begin previewing your container." A text input field labeled "Your website's URL" contains the URL "https://dev-srushti10.pantheonsite.io/". A blue "Connect" button is centered below the input field. Below the modal, a message bar says "Connected!" with a "Continue" button. To the left, a sidebar lists "Active Domains" with one entry: "dev-srushti10 https://dev-srushti10.pantheonsite.io/". On the right, there are buttons for "Add domain" and "Debugging".

## Home page of Google Analytics



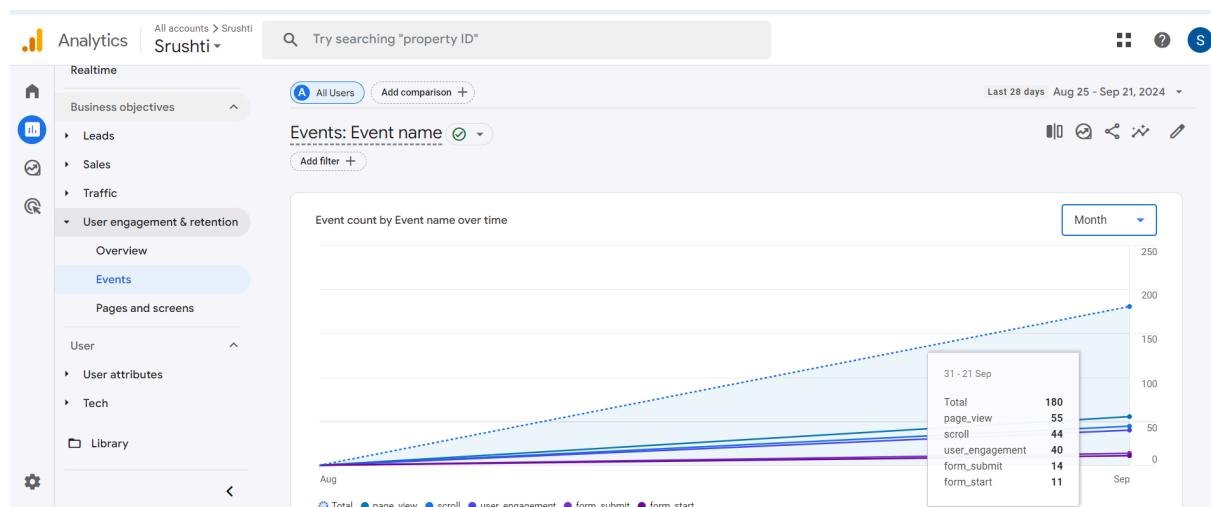
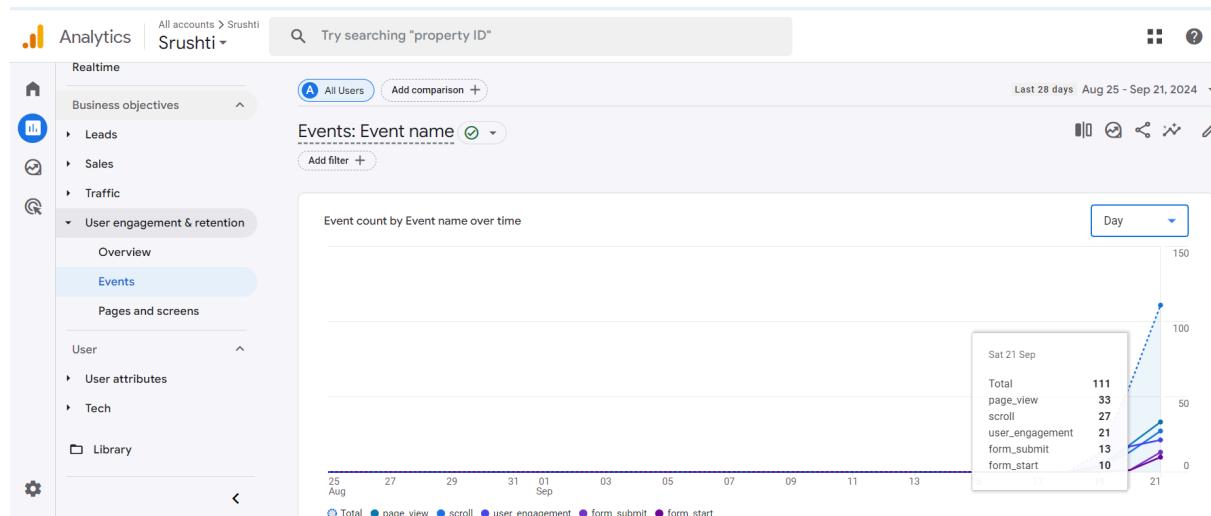
## Pages and screens: Page title and screen class for day and month



Pages and screens: Page path and screen class

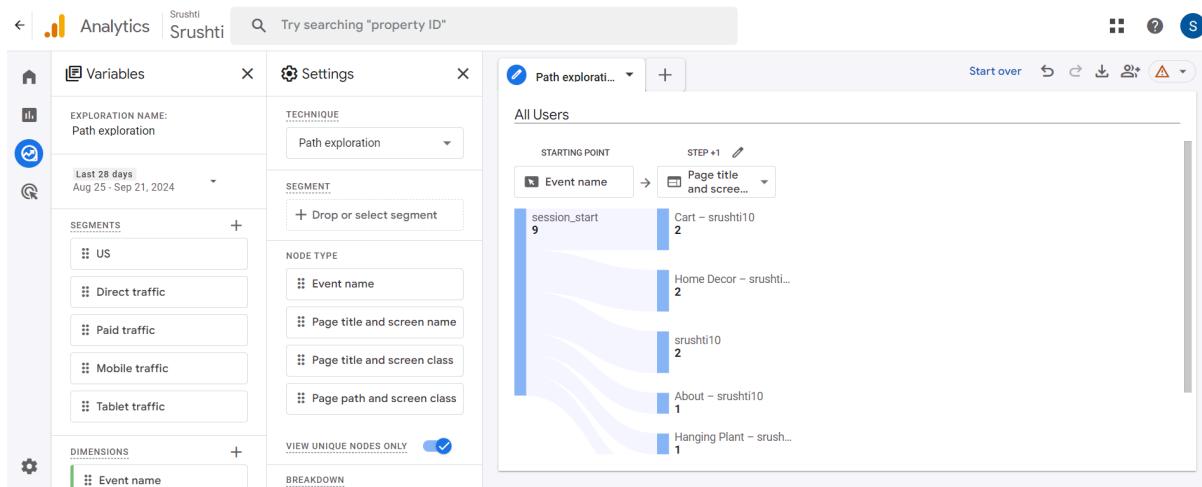
Page Path	Views	Active users	Views per active user	Average engagement time per active user	Event count	Key events
Total	55	9	6.11	1m 00s	180	0.0
1 /cart/	10	7	1.43	30s	37	0.0
2 /	5	1	5.00	2m 34s	16	0.0
3 /product-category/home-decor/	5	4	1.25	2s	14	0.0
4 /product/hand-made-pottery/	5	2	2.50	9s	18	0.0
5 /checkout/	4	4	1.00	1s	9	0.0
6 /product/colorful-bottle/	4	2	2.00	3s	13	0.0
7 /product/ceramic-blue-vase/	3	2	1.50	30s	11	0.0
8 /about/	2	3	0.67	5s	8	0.0
9 /product-category/garden-decor/	2	3	0.67	1s	5	0.0
10 /product/guangzhou-vase/	2	1	2.00	11s	7	0.0

## User engagement & retention: Events for day and month



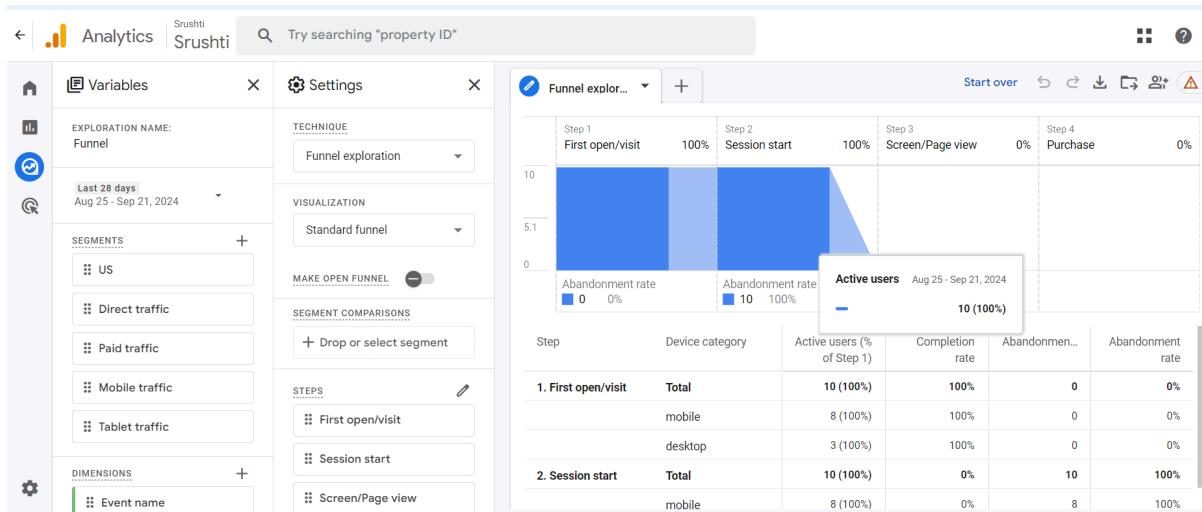
## Path Exploration

The path exploration process is critical for understanding the journey users take through a website, allowing businesses to optimize user flow, increase engagement, and drive conversions. In this project, path exploration will focus on tracking user behaviour and identifying opportunities for improvement through detailed data collection and analysis.



## Funnel Exploration

Funnel Exploration in Google Analytics 4 (GA4) is a powerful feature that allows you to analyse the steps users take to complete a defined process on your website or app, such as making a purchase or signing up for a newsletter. It helps visualize the user journey through a sequence of steps and highlights where users drop off at each stage, enabling you to identify bottlenecks and areas for improvement.



**Edit funnel steps**

**Step 1** First open/visit  
first\_visit **Or** **And**  
is indirectly followed by

**Step 2** Session start  
session\_start **Or** **And**  
is indirectly followed by

**Step 3** Screen/Page view  
page\_view **Or**

**Summary**  
USERS IN THIS FUNNEL FROM AUG 25 TO SEP 21  
0  
0% of all users  
  
TOTAL EVENTS  
0  
0% of all events

**Analytics** Srushti Srushti Try searching "property ID"

**Variables**  
EXPLORATION NAME: Funnel  
Last 28 days Aug 25 - Sep 21, 2024  
SEGMENTS: US, Direct traffic, Paid traffic, Mobile traffic, Tablet traffic  
DIMENSIONS: Event name

**Funnel explorer**  
TECHNIQUE: Funnel exploration  
VISUALIZATION: Standard funnel  
MAKE OPEN FUNNEL: Drop or select segment  
SEGMENT COMPARISONS: Step 1: First open/visit, Step 2: Session start, Step 3: Screen/Page view, Step 4: Purchase  
Abandonment rate: 0%, 0%, 10%  
Active users: 10 (100%)

Step	Device category	Active users (% of Step 1)	Completion rate
1. First open/visit	Total	10 (100%)	100%
	mobile	8 (100%)	100%
	desktop	3 (100%)	100%
2. Session start	Total	10 (100%)	100%
	mobile	8 (100%)	100%

## Using GA4 report builder created a report

Untitled spreadsheet

File Edit View Insert Format Data Tools Extensions Help

A1:Z1

1	Srushti Fulpagar		
2	Last Run On 2024-09-21 2:10		
3	Total Results Fo 8		
4	Total Results Re 8		
5	Tokens per quot 1 consumed 199899 remaining		
6	Tokens per hour 1 consumed 199899 remaining		
11	Totals For All Results	active1DayUsers activeUsers addToCarts bounceRate cartToViewRate firstTimePurchase sessions	9 9 0 0.5 0 0
14	Results Breakdown	city day hour achievementId browser	active1DayUsers activeUsers addToCarts bounceRate cartToViewRate firstTimePurchase sessions
16	Mumbai	21 1 Chrome	5 5 0 0.6 0 0
17	Mumbai	20 10 Chrome	1 1 0 0 0 0
18	Mumbai	20 15 Chrome	1 1 0 0 0 0
19	Mumbai	20 19 Chrome	1 1 0 0 0 0
20	Mumbai	20 20 Chrome	1 1 0 1 0 0
21	Rasayani	20 0 Chrome	1 1 0 0 0 0
22	Rasayani	21 2 Chrome	1 1 0 1 0 0
23	Rasayani	21 1 Chrome	0 0 0 1 0 0

Create Report

Report name: Srushti Fulpagar

Account: Srushti

Property: Srushti

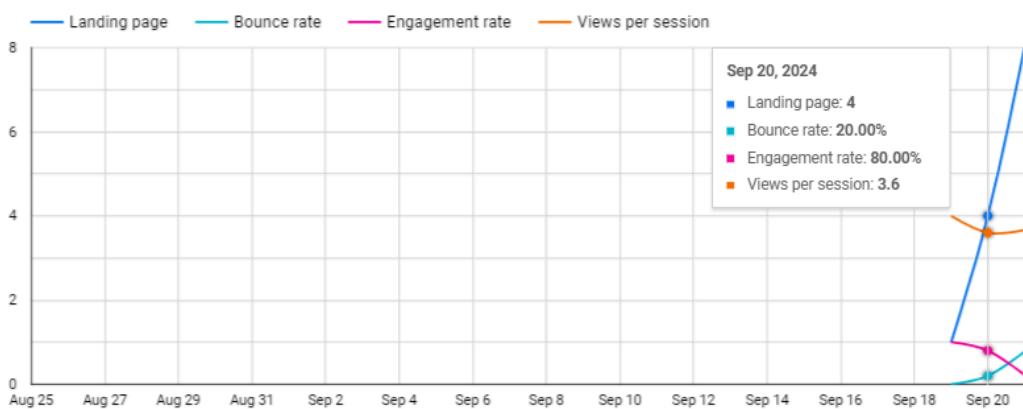
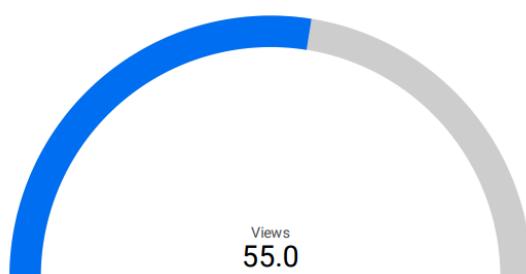
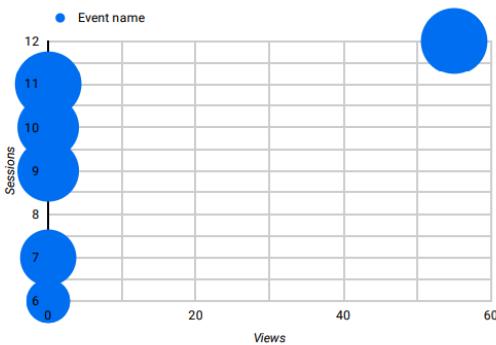
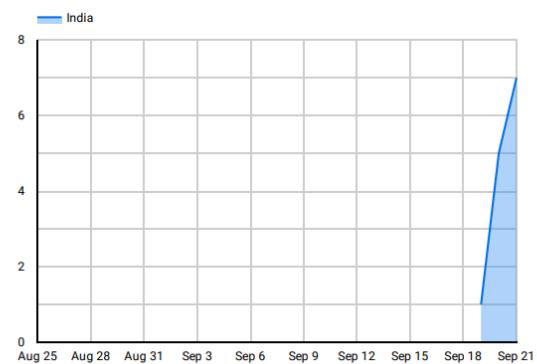
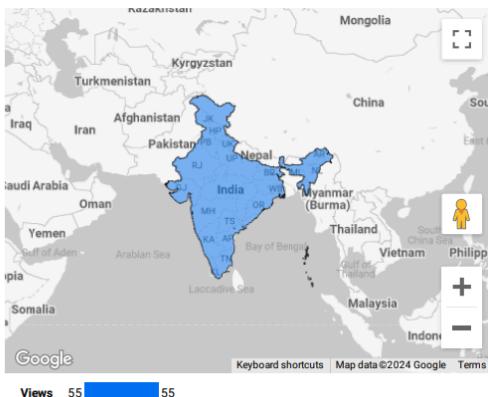
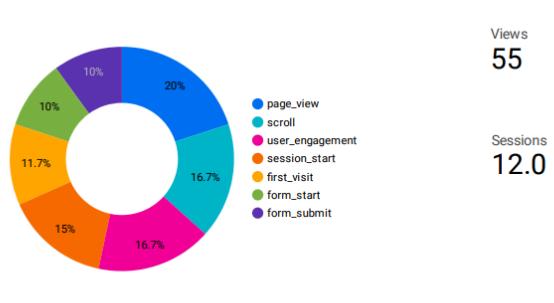
Start date: yesterday

End date: today

Dimensions: city, day, hour, achievementId, browser

## Visualizations In Looker Studio

Event name	Views
1. page_view	55
2. first_visit	0
3. form_start	0
4. form_submit	0
5. scroll	0
6. session_start	0
7. user_engagement	0



## Conclusion

Web analytics through Google Tag Manager, Google Analytics 4 (GA4), and Looker Studio offers a robust framework for enhancing website performance. When integrated with WordPress, this approach enables businesses to gain deeper insights into user behaviour, engagement metrics, and overall performance, driving improvements that align with organizational objectives.

Implementing web analytics through Google Tag Manager, Google Analytics 4, and Looker Studio presents a comprehensive strategy for optimizing website performance, especially within a WordPress environment. This integrated approach not only enhances the understanding of user behaviour but also facilitates data-driven decisions that lead to improved user experiences and increased conversions. By leveraging customizable reporting and dynamic visualizations, businesses can identify critical areas for improvement and respond effectively to user needs. Ultimately, this project illustrates that consistent monitoring and optimization of web analytics are essential for achieving organizational objectives, enhancing engagement, and driving successful outcomes in the digital landscape.