

# Data Analytics

## CS301

### Google Analytics

Week 2: 8<sup>th</sup> and 11<sup>th</sup> Sept  
Fall 2020

Oliver BONHAM-CARTER



# Looking at Websites and Data

- The Internet houses websites that are used to give product information to *consumers* and potential *customers*.
- Q: How do owners of these sites know that they are fulfilling their roles to generate business?
- Web Analytics to study web traffic to and from a site
- Yandex Metrics dashboard demo:
  - <https://metrika.yandex.com/dashboard?group=day&period=week&id=44147844>
- Matomo dashboard demo
  - Demo: <https://demo.matomo.org/>



# Website Analysis

Traffic source  
Sessions



Do these origins explain their interests?

How can I use this information to get more visits?

How did users find my site?

Where did visitors reside?

- Direct traffic
- Search engine traffic
- Ad traffic
- Link traffic
- Social network traffic
- Other

28.5 %

26.2 %

21.5 %

19.2 %

2.97 %

1.74 %

# Google Analytics



# Google Analytics

- A service by Google to help users determine what is happening on their web sites.
- Allows users to analyze:
  - Website Traffic: User on your site.
  - Conversions: What the users do there and how are the *goals* of the site completed?
  - E-commerce: What (financial) involvement the users have with your site
  - Where do visitors come from? Estimated ages?
  - Browser types? Human Languages?
  - Etc.

Basic questions a website owner would want to know ...



# WebSite Traffic

**Web traffic is the amount of data sent and received by visitors to a web site, necessarily not including traffic generated by bots. This is determined by the number of visitors and the number of pages they visit.**

- Where are your users coming from (*geographical*)?
- How did these users arrive here (*direct searches, referrals from others to site*)?
- What pages and for how long did they read (*depth*)?
- How much of the site did they read before leaving? (*bouncing*).



# WebSite Conversions

**The ability to get website visitors to do what you want them to do: buy products, sign up for your newsletters and communications, register for a webinar, or fill out a lead/contact form or survey.**

- What pages were clicked on (*Page views*)?
- How many users clicked on purchase buttons (number of *conversions*)?
- How many users downloaded (read, viewed) your hand-out newsletter (*goals*)?
- How long to land on “check-out” page? Time to decide to buy?
- Has a specific number of people *done something* in some allotted time on the site (*user activity*)?





# WebSite E-commerce

**The ability of a website to attract interest and transactions for business development online.**

- Online shopping, retail sales directly to consumers
- Business to business buying and selling
- Gathering demographic data through web contacts and social media
- Marketing to specific populations
- Engaging in *pretail* for launching new products and services before general sales





# Online, Data Collection

- But people do not always complete surveys to provide enough information.
- Google Analytics allows web builders to enhance their existing web sites by watching how people use the site.
- Enhancements:
  - Productivity
  - Business development
  - Site intuition
  - How to Market the site?



Google Analytics





# Default Reports

- **Real-Time Usage**
  - Who is on your site now?
- **Audience**
  - What types of users *tend* to use you site?
- **Acquisition**
  - How do these users get to your site?
- **Behavior**
  - What did the users do? What pages are most popular?
- **Conversions**
  - How many of the users completed some specific task of the website?

# Real-Time Usage

- Who is on your site now?

Keywords that brought them here

## Overview



## Pageviews



## Top Referrals:

	Source	Active Visitors
1.	Linked here from where?	
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

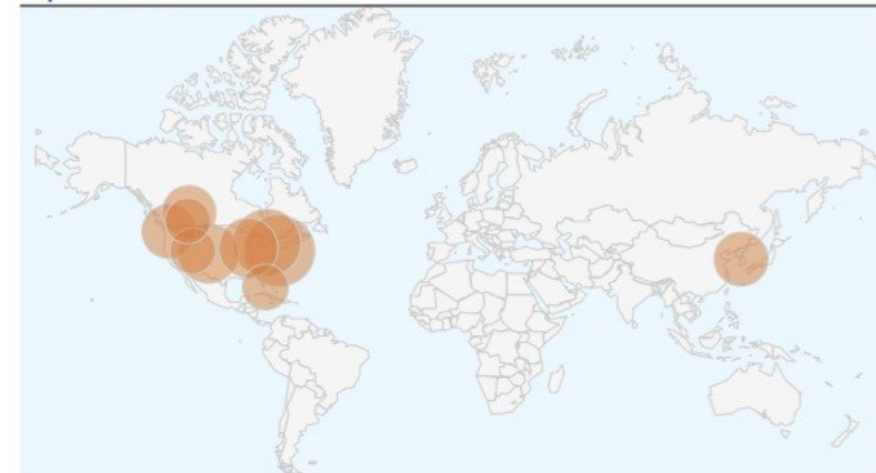
## Top Active Pages:

	Active Page	Active Visitors	
1.	Which pages are they looking at?	15	5.95%
2.		12	4.76%
3.		11	4.37%
4.		6	2.38%
5.		6	2.38%
6.		5	1.98%
7.		5	1.98%
8.		4	1.59%
9.		4	1.59%
10.		4	1.59%

## Top Keywords:

	Keyword	Active Visitors ↓
1.		39
2.		8
3.		3
4.		2
5.		2
6.		1
7.		1
8.		1
9.		1
10.		1

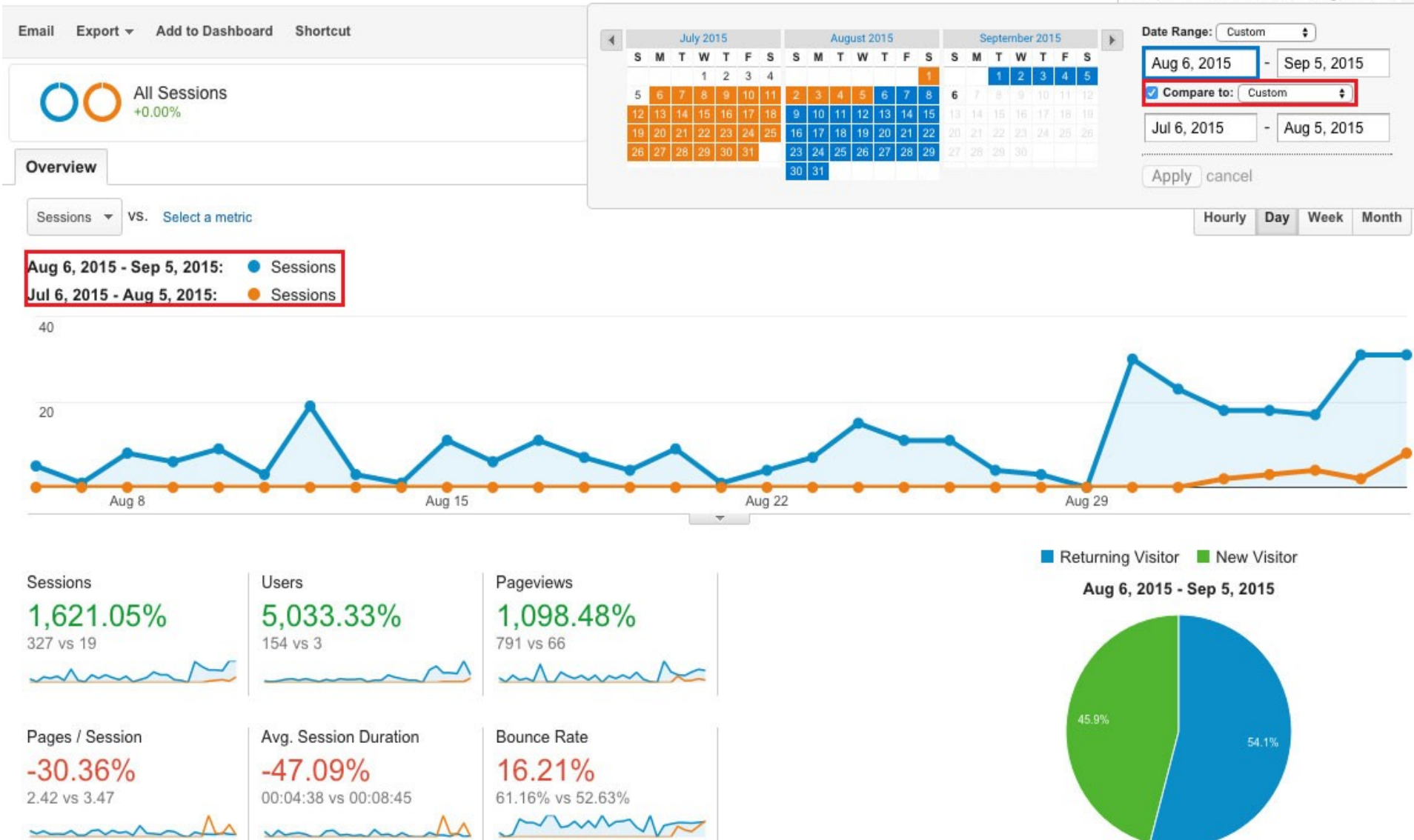
## Top Locations:



# Audience

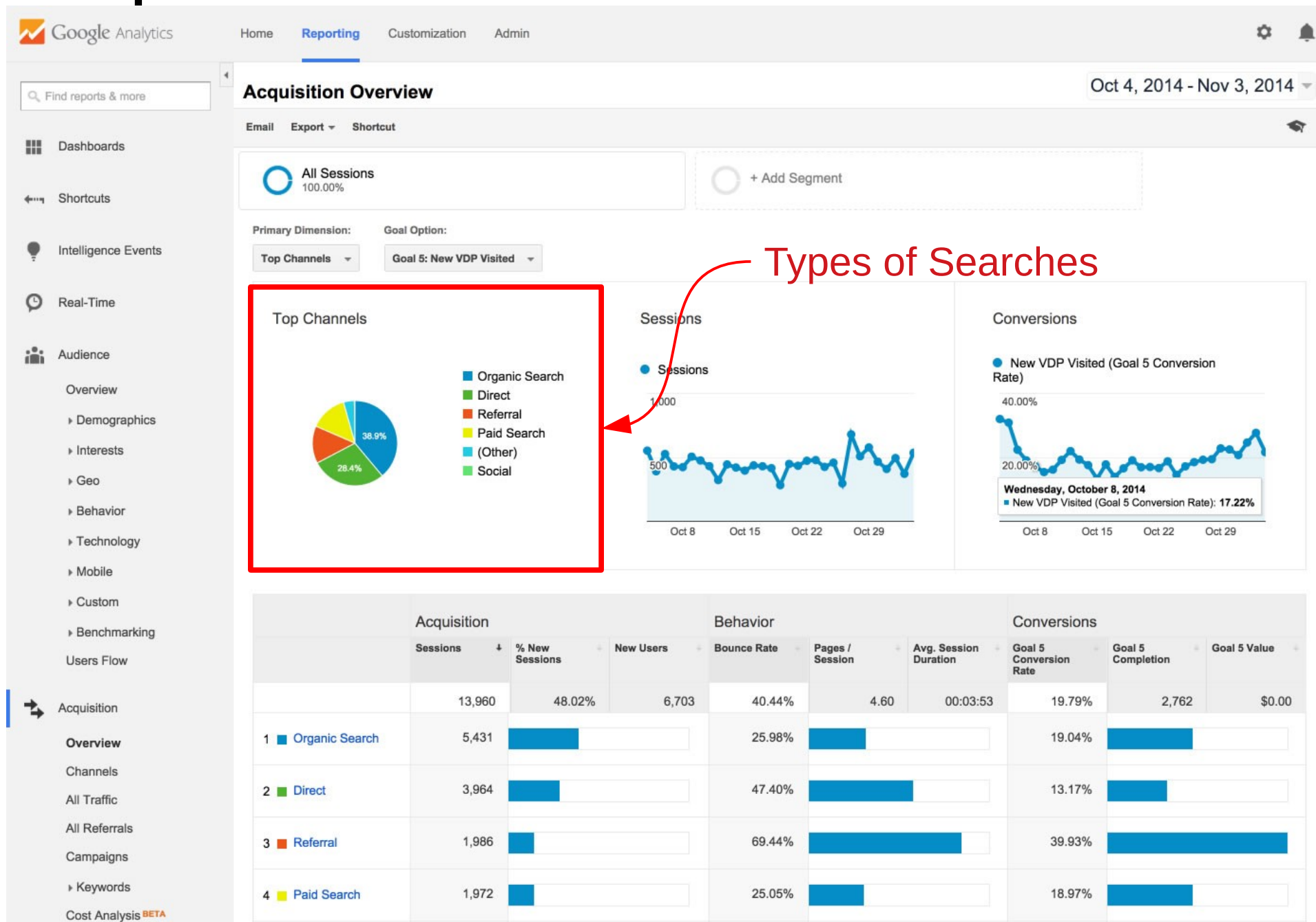
- Who are your users?
- When was that?

## Audience Overview



# Acquisition

- How do these users get to your site?



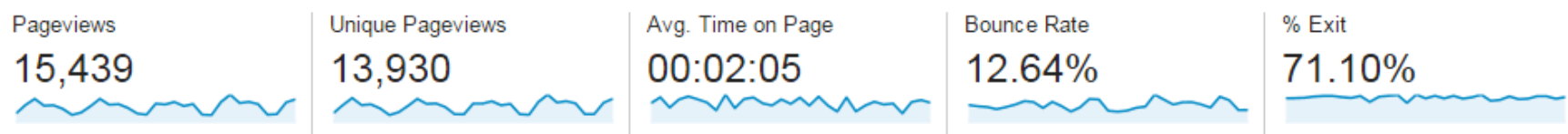


# Site Arrivals

- **Organic Searches**—Visitors who come to your website after searching Google.com and other search engines
- **Paid Searches**—Visitors who come to your website from an AdWords or other paid search ad
- **Direct**—Visitors who come to your website without a traceable referral source, such as typing your URL into their address bar or using a bookmark on their browser
- **Referrals**—Visitors who come to your website from another website by clicking on a link
- **Social**—Visitors who come to your website from a social network
- **Other**—If you use UTM parameters for custom campaign tracking, the traffic linked to those campaigns is listed here

# Behavior

- What are the users doing on your site?



## Site Content

### Page

Page Title

### Site Search

Search Term

### Events

Event Category

## Page

## Pageviews % Pageviews

Page	Pageviews	% Pageviews
1. /	793	5.14%
2. /lp/checklist-dm/2016-checklist.php	584	3.78%
3. /blog/301-redirects-formatting-bulk-redirects-in-4-quick-steps/	480	3.11%
4. /blog/onsubmit-onclick-goal-tracking-in-google-analytics/	455	2.95%
5. /lp/checklist-dm/2016-checklist-ab.php	346	2.24%
6. /guide/the-2016-digital-marketing-strategy-checklist/	310	2.01%
7. /about-us/	282	1.83%
8. /blog/extended-ad-headlines-in-adwords-are-they-really-worth-it/	278	1.80%
9. /blog/behind-the-scenes-11-excel-functions-that-will-make-your-life-easier/	250	1.62%
10. /pricing/	244	1.58%



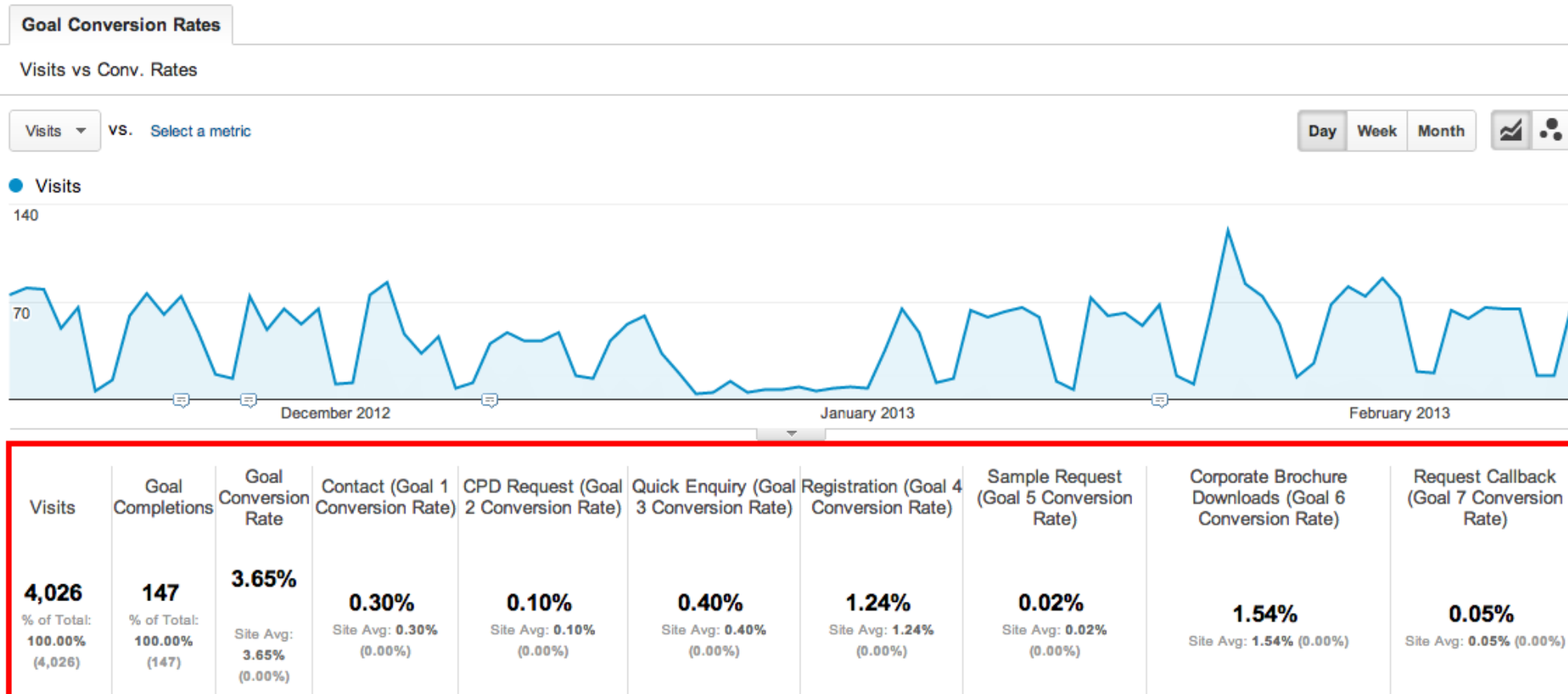


# Activity On a Site

- **Pageview:** An instance of a page being loaded (or reloaded) in a browser. Pageviews is a metric defined as the total number of pages viewed.
- **Unique Pageviews:** The number of sessions during which the specified page was viewed at least once. A unique pageview is counted for each page URL + page Title combination.
- **Session:** The duration that a user is on a site. Inactivity of 35 mins ends a current session.
- **Average Time:** The average amount of time users spent viewing a specified page or screen, or set of pages or screens.
- **Bounce rate:** The percentage of single-page sessions in which there was no interaction with the page. A bounced session has a duration of 0 seconds.
  - Did visit your main site (providing direction to other site pages) and then leave it soon after without seeing other pages?
  - Are you running a blog with only one (main) page.
- **Exit:** It indicates how often users exit from that page or set of pages when they view the page(s).
  - For the page or set of pages,
    - $\text{percent\_Exit} = (\text{number of exits}) / (\text{number of pageviews})$

# Conversions

- Have your site goals been fulfilled?



- Your website conversion rate is the ratio of visitors to your website that then go on to take your desired action (purchasing a product, signing up for a newsletter, etc).
- Goals must first be set:
  - Financial,
  - User activities



# Setting Up Analytics on Sites

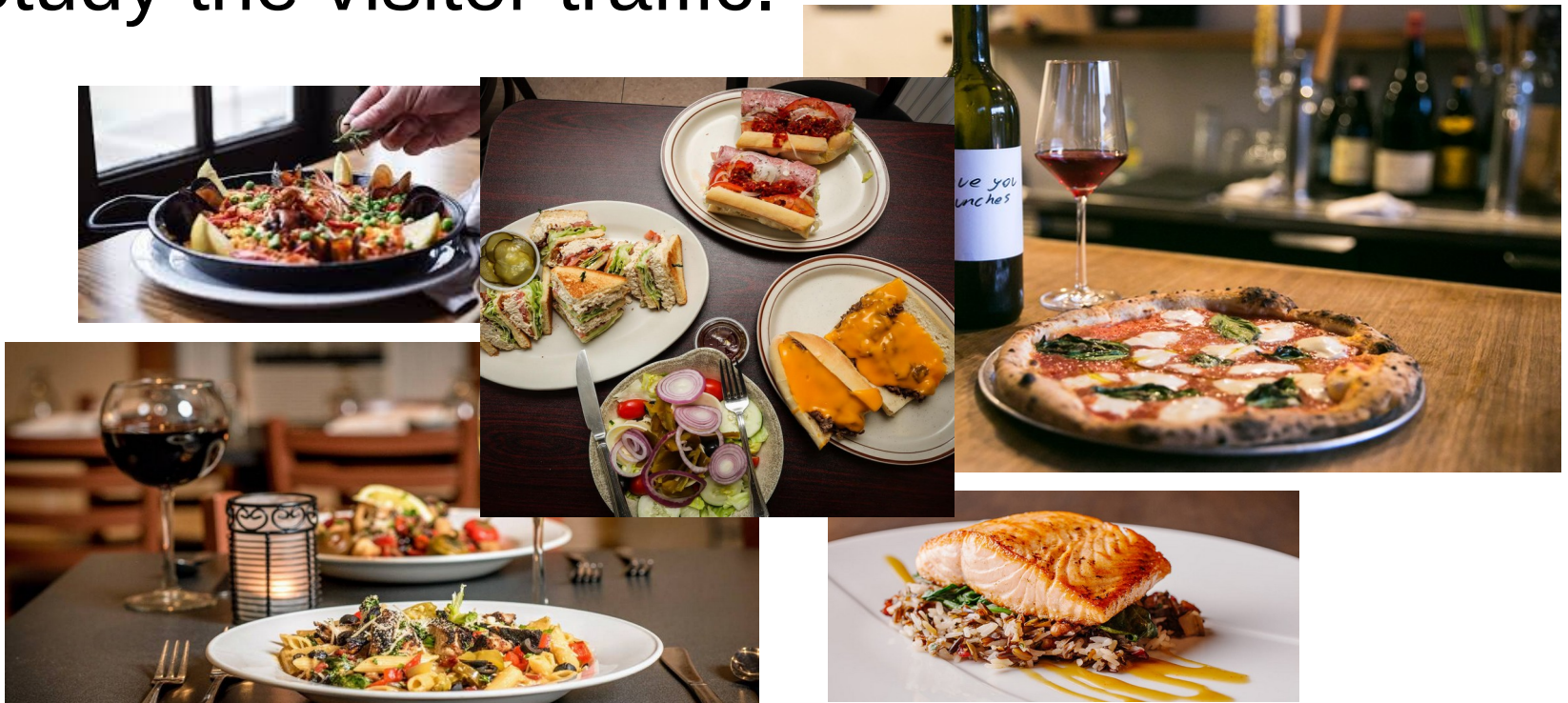
- Before you can use Google analytics, you should create a sandbox website
- Then, once the website is created, we will add the analytics to begin the fun.





# Analysis of Restaurant Website

- Build a website with Google Pages
- Set-up an account on Google
- Connect the analytics account to the website
- Study the visitor traffic.

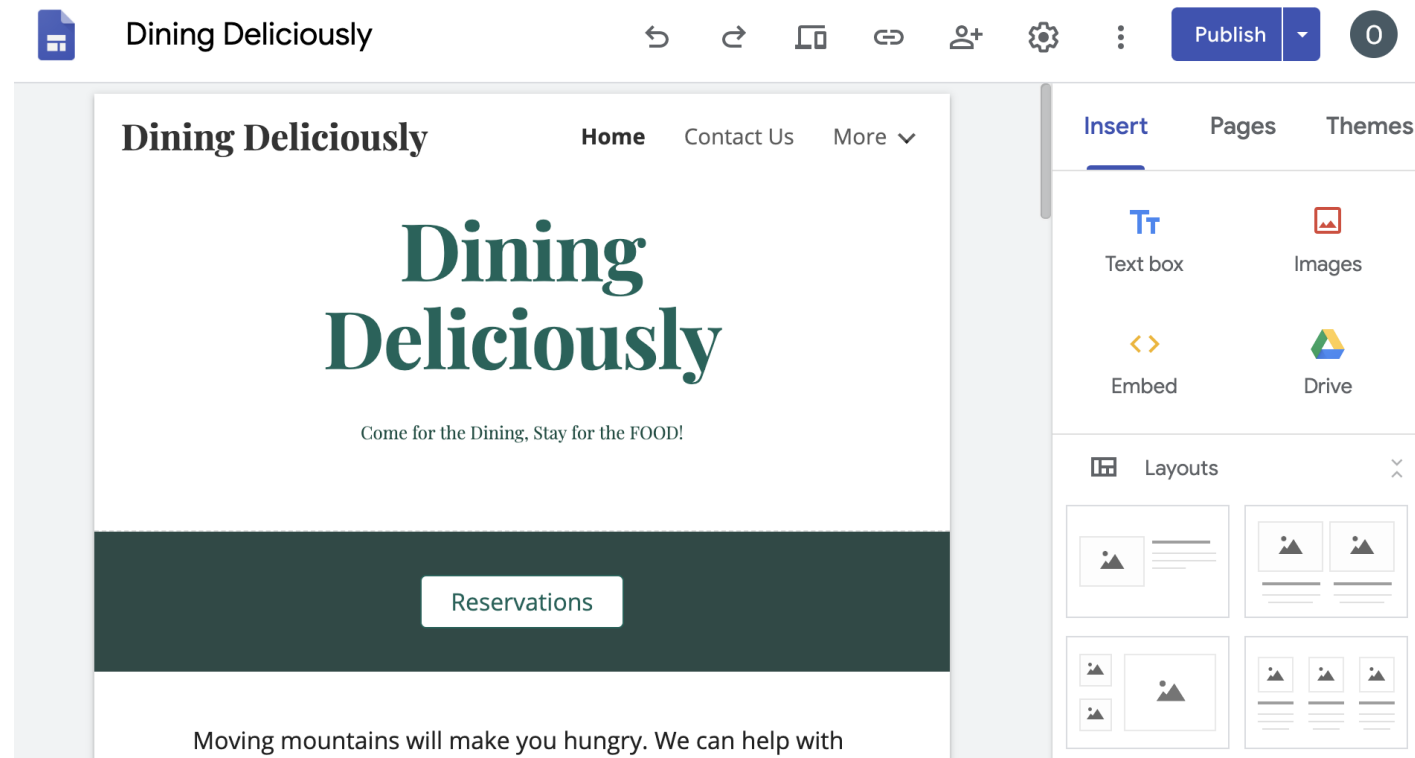




# Setting Up Your Test Site

- Create a Google Sites website at “Google Sites”
  - <https://sites.google.com/new>
- Already have a site?
  - <https://sites.google.com/a/allegheny.edu>
- Give it a name now for publishing and add content later!!

**THINK**



Link: <https://sites.google.com/view/diningdeliciously/home>

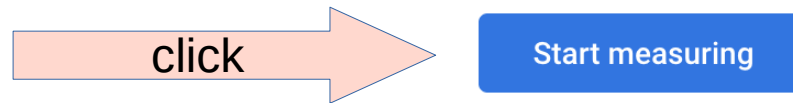


ALLEGHENY  
COLLEGE

## Setup an Analytics Account

# Welcome to Google Analytics

Google Analytics gives you the free tools you need to analyze data for your business in one place, so you can make smarter decisions.



<https://analytics.google.com/analytics/web/>



# Setup an Analytics Account



## Create account

### 1 Account setup

#### Account details

##### Account name (Required)

Accounts can contain more than one tracking ID.

#### Account Data Sharing Settings ?

Data you collect, process, and store using Google Analytics ("Google Analytics data") is secure and kept confidential. This data is used to [maintain and protect](#) the Google Analytics service, to perform system critical operations, and in rare exceptions for legal reasons as described in our [privacy policy](#).

Complete the  
account name.

(You might need  
to be logged  
into your gmail.)





# Setup an Analytics Account



Analytics



## Create account



Account setup

[Edit](#)

2

What do you want to measure?



### Web

Measure your website

- Understand where your users are coming from and turn data into insights
- Analyze user behavior and optimize for your business
- Discover trends with performance and conversion analysis





# Setup an Analytics Account

## Property details

Website Name

My New Website

Value is required.

Website URL

http:// ▼

Example: http://www.mywebsite.com

Industry Category

Select One ▼

Reporting Time Zone

United States ▼

(GMT-07:00) Los Angeles Time ▼

Complete the  
Website name  
And URL field,  
then choose a  
category to  
classify your site.

Then, next page,  
accept the terms to  
begin your analysis

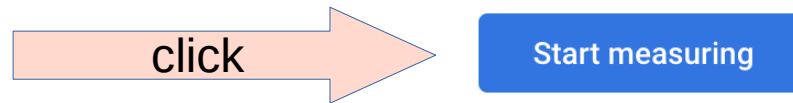


ALLEGHENY  
COLLEGE

## Setup an Analytics Account

# Welcome to Google Analytics

Google Analytics gives you the free tools you need to analyze data for your business in one place, so you can make smarter decisions.



<https://analytics.google.com/analytics/web/>



# Setup an Analytics Account

**ADMIN** USER

Property **+ Create Property**

obctestsite

←

Property Settings

Property User Management

Tracking Info

**Tracking Code**

Data Collection

Data Retention

User-ID

Session Settings

Organic Search Sources

Referral Exclusion List

Search Term Exclusion List

**Dd** Data Deletion Requests

**PRODUCT LINKING**

Google Ads Linking

**Tracking ID**

UA-156435460-1

**Status**

No data received in past 48 hours. [Learn more](#)

**Website Tracking**

**Global Site Tag (gtag.js)**

This is the Global Site Tag (gtag.js) tracking code for this property. Copy and paste this code as the first item into the <HEAD> of every webpage you want to track. If you already have a Global Site Tag on your page, simply add the **config** line from the snippet below to your existing Global Site Tag.

```
<!-- Global site tag (gtag.js) - Google Analytics -->
<script async src="https://www.googletagmanager.com/gtag/js?id=UA-156435460-1"></script>
<script>
  window.dataLayer = window.dataLayer || [];
  function gtag(){dataLayer.push(arguments);}
  gtag('js', new Date());

  gtag('config', 'UA-156435460-1');
</script>
```

The Global Site Tag provides streamlined tagging across Google's site measurement, conversion tracking, and remarketing products – giving you better control while making implementation easier. By using gtag.js, you will be able to benefit from the latest dynamic features

From the settings item

Note your tracking number to use to link this web site to your analytics account



# Setup an Analytics Account

**Site analytics**

Connect your site to a Google Analytics account to get insights and metrics on usage

Google Analytics tracking ID

UA-156435460-1

Cancel Save

Add your tracking number to use to link this web site to your analytics account



# Setup an Analytics Account

ADMIN

USER

Property [+ Create Property](#)

obctestsite

←

Property Settings

Property User Management

Tracking Info

Tracking Code

Data Collection

Data Retention

User-ID

Session Settings

Organic Search Sources

Referral Exclusion List

Search Term Exclusion List

Dd

Data Deletion Requests

PRODUCT LINKING

Google Ads Linking

Tracking ID

UA-156435460-1

Status

No data received in past 48 hours. [Learn more](#)

Website Tracking

Global Site Tag (gtag.js)

This is the Global Site Tag (gtag.js) tracking code for this property. Copy and paste this code as the first item into the <HEAD> of every webpage you want to track. If you already have a Global Site Tag on your page, simply add the **config** line from the snippet below to your existing Global Site Tag.

```
<!-- Global site tag (gtag.js) - Google Analytics -->
<script async src="https://www.googletagmanager.com/gtag/js?id=UA-156435460-1"></script>
<script>
  window.dataLayer = window.dataLayer || [];
  function gtag(){dataLayer.push(arguments);}
  gtag('js', new Date());

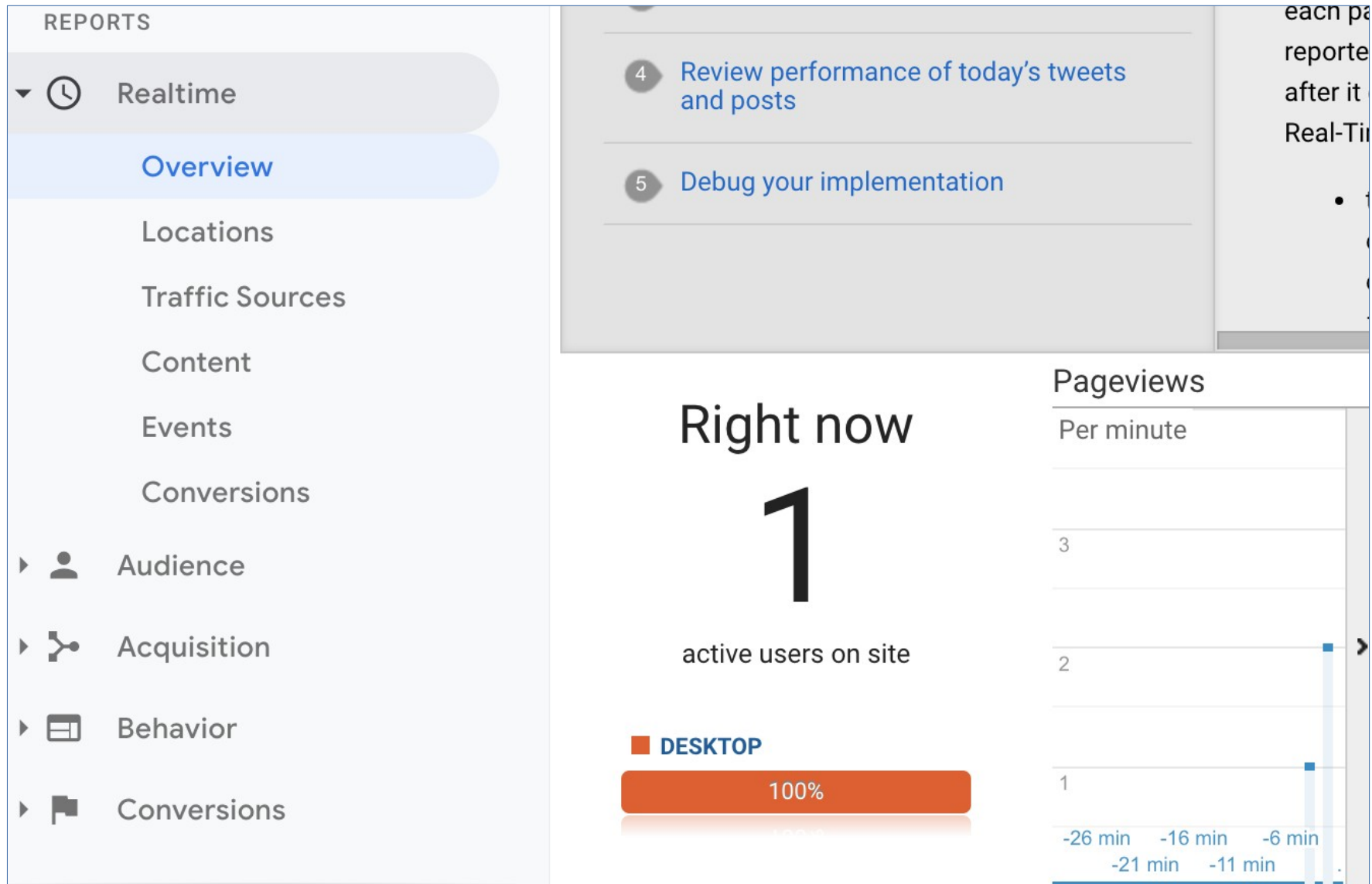
  gtag('config', 'UA-156435460-1');
</script>
```

From the settings item

Note: if you have a coded website, you could add this javascript code to the header section of the HTML code.



# Ready to Play







# Setup an Analytics Account

- Go to Google Analytics at <https://analytics.google.com/analytics/web/>
- Or go directly: <https://analytics.google.com/analytics/web/provision/?authuser=1#provision/SignUp/>
- Note: If you have a Google account, and are not signed in, click Sign in. If you do not have a Google account, click Create an account.
- Once you have signed in to your Google account, click Access Google Analytics.
- Click “Sign up”.
- Fill in your Account Name, Website Name, Website URL, and select an Industry Category and Reporting Time Zone
- Under Data Sharing Options, check the boxes next to the options that you want.
- Click Get Tracking ID (or JS code for your html pages, if necessary)
- From the Google Analytics Terms of Service Agreement that opens, click, “I Accept.”
- Add the Tracking ID to your site.



# Let's Play

- Get to know your analysis dashboard
- Consider the following:
  - Who is the *audience* of your site?
  - What pages have they viewed?
  - How much time did they spend viewing the pages?
  - How did your traffic arrive at your site? From where?
  - Look at your tabs. What options do they list?
- *How can you use this information to the benefit of your site?*

**THINK**