

# Data Analytics

## CS301

### Google Analytics

Week 2

Fall 2023

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# Websites and Data



- *E-commerce: online resources to connect sellers to customers*
- How do we check if our resource is
  - connecting people?
  - Easy to use?
  - Getting business?
  - Easily found on search engines?
  - What would you like to know about the health of your online business?





# 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 %



# Website Analytics

- Q: How do owners of these sites know that they are fulfilling their roles to generate business?
- A: Web Analytics to study web traffic to and from a site, and to study its activity
- Matomo dashboard demo
  - Demo: <https://demo.matomo.org/>
- Yandex Metrika dashboard demo
  - <https://metrika.yandex.com/dashboard?group=day&period=week&id=44147844>



Yandex Metrika

# 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:** where are site's users coming from?
  - **Conversions:** How are well the *goals* being completed?
  - **E-commerce:** Where, when are the sales coming from?
  - **Misc:** Where do the visitors come from? Estimated ages? Educations? Genders? Interests? Profiles? Browser types? Human Languages? Recent purchases?

Many basic questions a website owner would want to know ...





# 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*).



# 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*)?





# 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

- Give users a survey to learn about them !!
- 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?





# 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

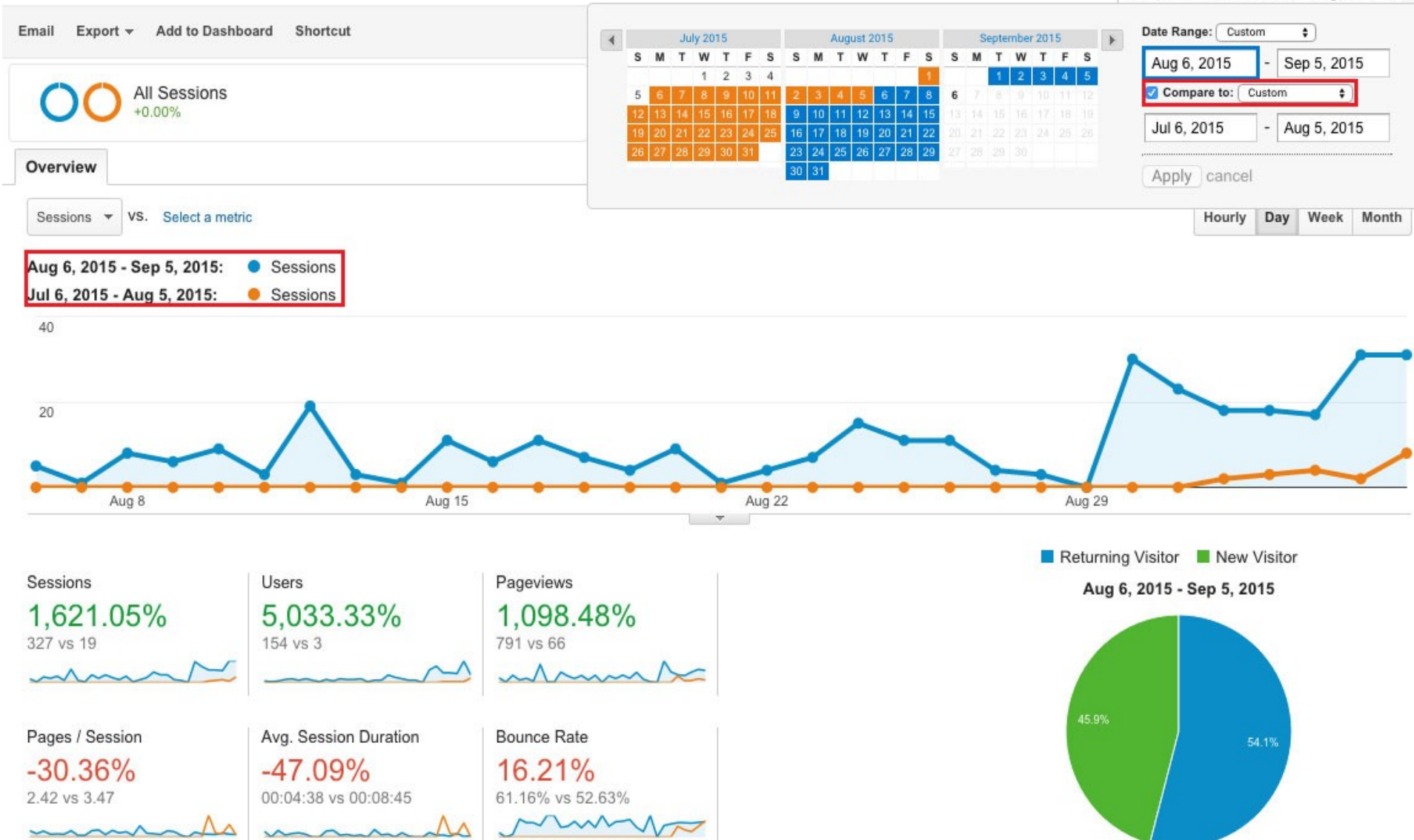
## Top Locations:



# Audience

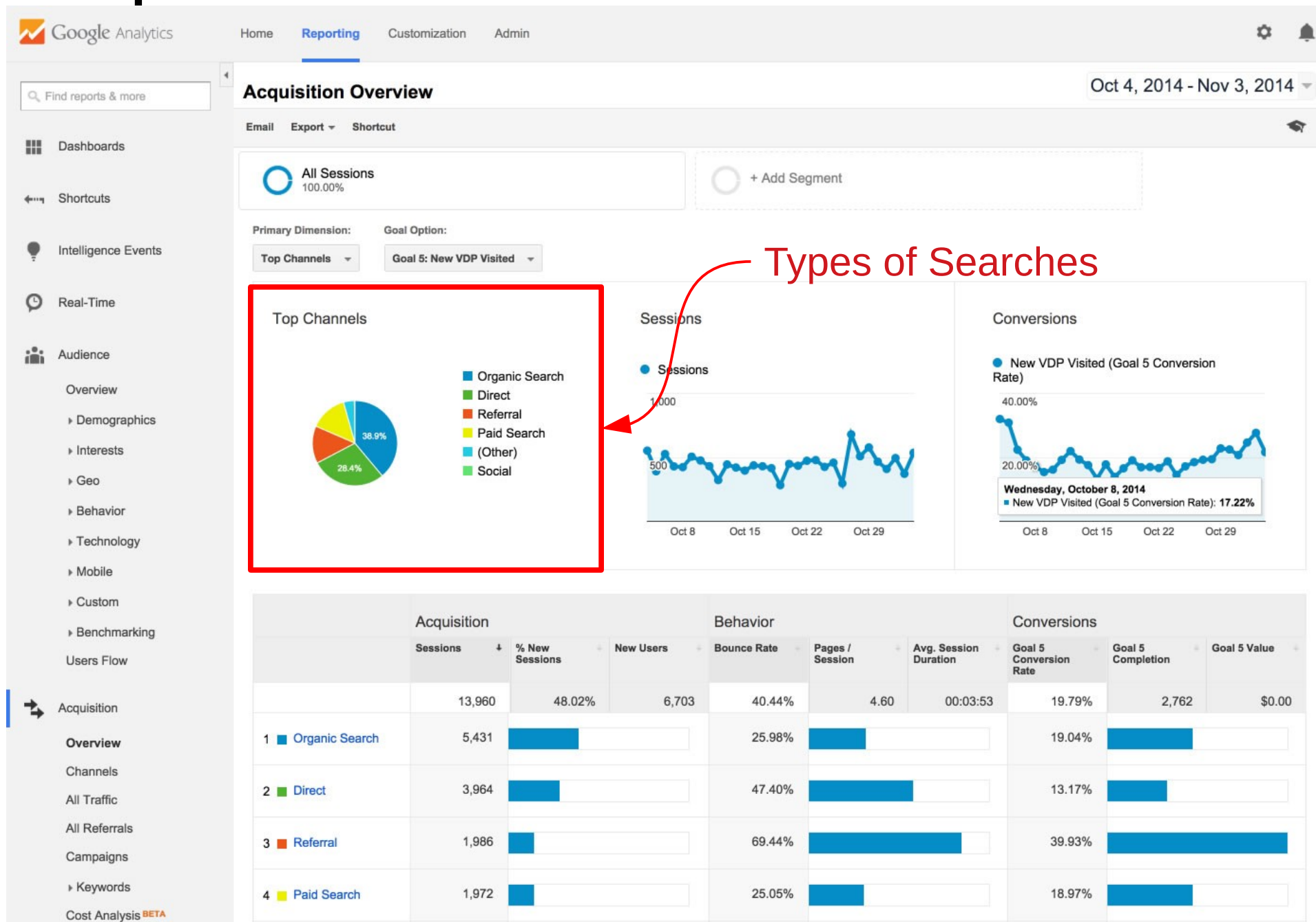
- Who are your users?
- When was that?

## Audience Overview



# Acquisition

- How do these users get to your site?





# Site Arrivals

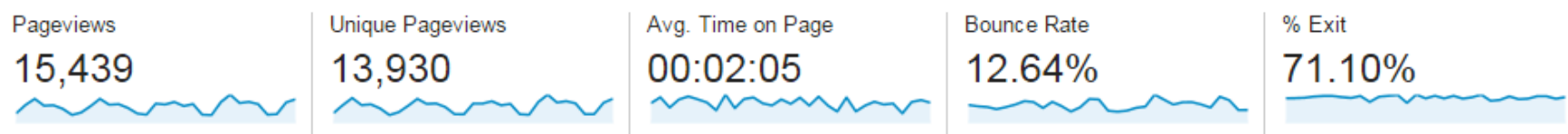
## How did users arrive?

- **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%

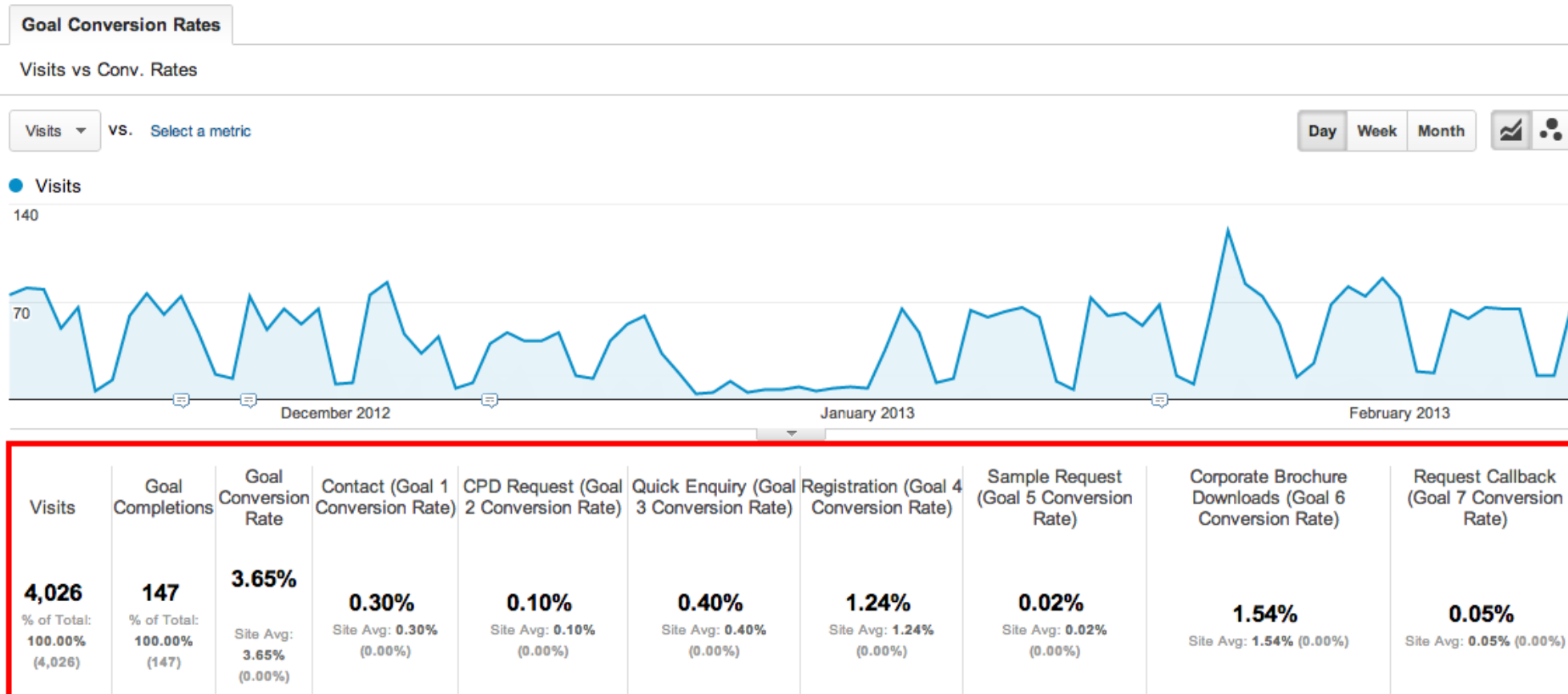


# Activity On a Site

- **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

# Bring it!



Now.  
You.  
Try.



# Setting Up Analytics

- 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 test website with Google sites to experiment with Google Analytics
- Set-up an account on Google
- Connect the analytics account to the website
- Study the visitor traffic.

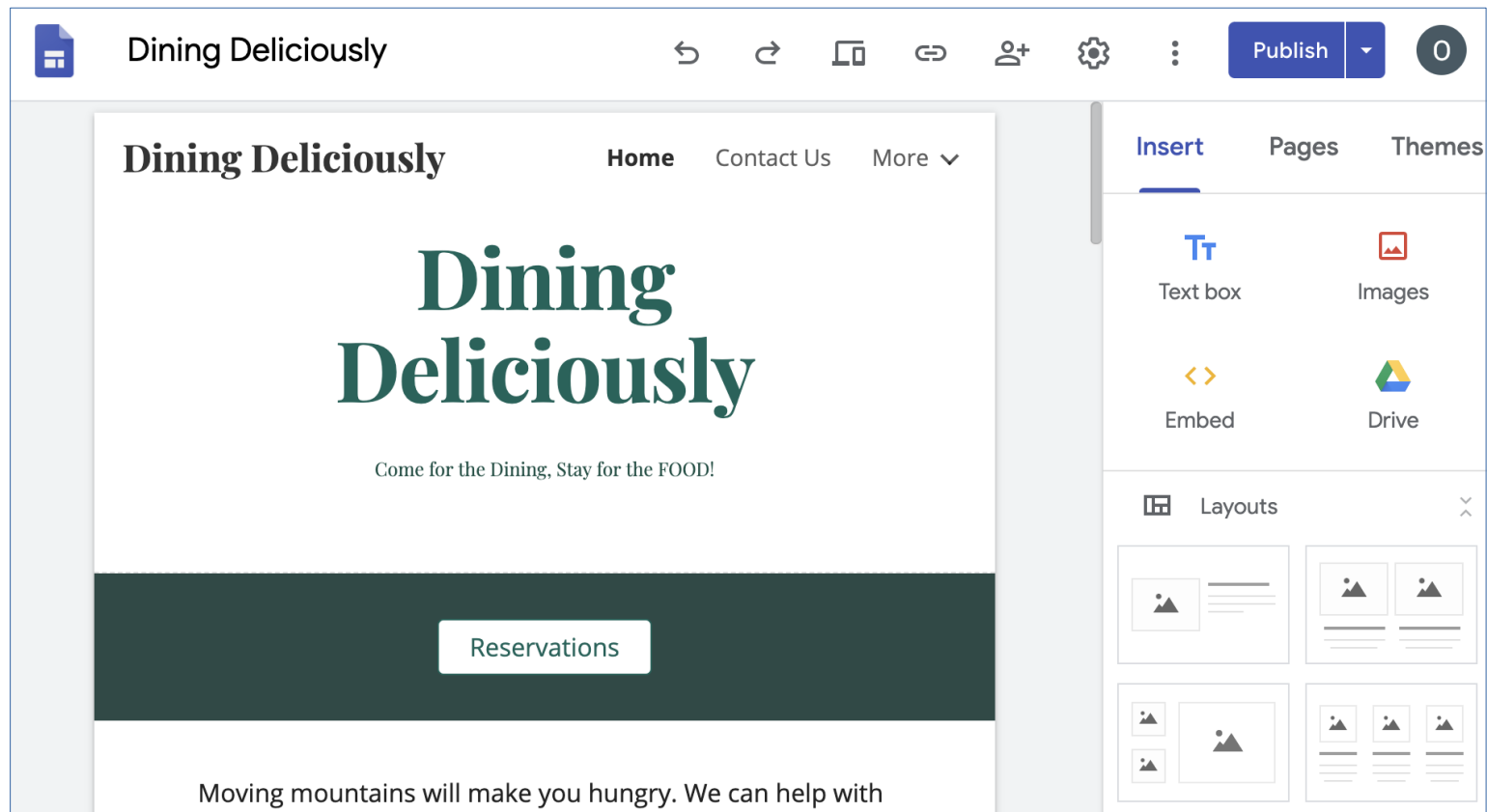




# Setting Up Your Test Site

- Create or find a web site at “Google Sites”
  - <https://sites.google.com/new>
- Give it a name for publishing and add content later!!

**THINK**



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



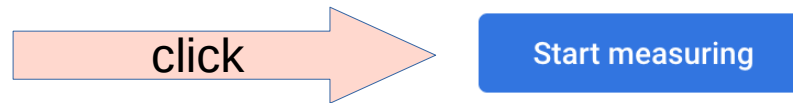


ALLEGHENY  
COLLEGE

## 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/>



# Give a Dashboard Name

## 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  
working gmail  
account.)



# Click Through



Analytics



## Create account

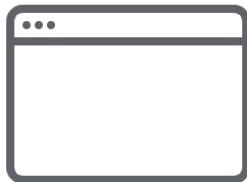


Account setup

[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





# Enter the Dashboard Name



 Account setup

**2** Property setup

## Property details

A property represents a business's web and/or app data. An account can contain one or more properties. [Learn more](#)

\*Navigate to your [Firebase account](#) if you want to create a new property for an existing Firebase project.

Create a Google Analytics 4 property to measure your web and/or app data.

Property name

Property name is required.

Reporting time zone

United States ▼ (GMT-04:00) New York Time ▼

Currency

US Dollar (USD \$) ▼

You can edit these property details later in Admin

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



# Connect Website to Analytics Account

ADMIN

USER

Property [+ Create Property](#)

myProjects (350227767)

←

✓ Setup Assistant

📅 Property Settings

👥 Property Access Management

**📊 Data Streams**

🕒 Events

🚩 Conversions

👤 Audiences

📐 Custom definitions

📊 ▶ Data Settings

📶 Data Import

📊 Reporting Identity

## Start collecting data

To set up data collection for your website or app, choose from where you will be collecting data (the Web, an Android app, or an iOS app). Next, you'll get instructions for adding a data collection tag to that source.

[Learn more about data collection](#)

Choose a platform

Web

Android app

iOS app

Complete the Website name and URL field, then choose a platform (i.e., *category*) to classify your site.



# Add URL to Analytics Account

## × Set up data stream

Set up your web stream


Website URL

Stream name

https:// ▾

sites.google.com/allegheny.edu/myprojects/


myProjects


 **Enhanced measurement**


Automatically measure interactions and content on your sites in addition to standard page view measurement.

Data from on-page elements such as links and embedded videos may be collected with relevant events. You must ensure that no personally-identifiable information will be sent to Google. [Learn more](#)


Measuring:

 Page views

 Scrolls

 Outbound clicks

+ 4 more



Create stream

Enter the Website URL in the **https://** field, then give your stream a name (to find this website's analysis details from a list of others).  
Click **Create Stream**



# Connect Website to Analytics Account

Stream details

STREAM NAME

myProjects


STREAM URL

<https://sites.google.com/allegheny.edu/myprojects/>

STREAM ID

4412345673

MEASUREMENT ID

**G-C4145678901** 

Copy this ID-Tracking number (called a *Measurement ID*).  
Paste into Google Site's Analysis setting.





# Add your Measurement ID to Your Site's *Tracking* Setting

All changes saved in Drive

Settings

Analytics setting changes take effect immediately after closing this dialog

- Navigation
- Brand images
- Viewer tools
- Analytics**
- Announcement banner

Connect your site to a Google Analytics account to get insights and metrics on usage. [Learn more](#)

Google Analytics tracking or measurement ID

**G-C4145678901**

Enable analytics

Paste the ID-Tracking number into  
the **Analytics** setting of your website.



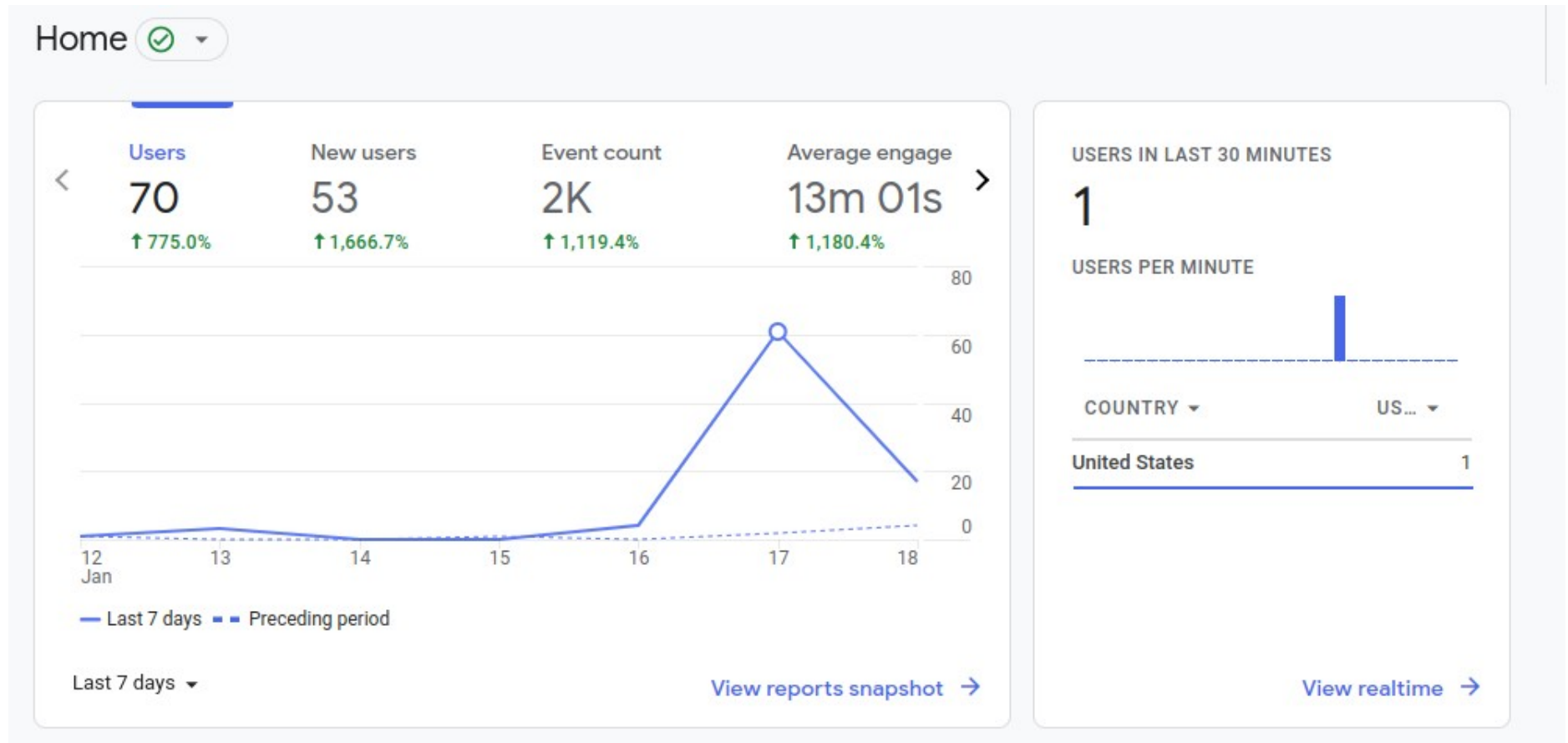
## Select the Stream's Name to View Analytics

The screenshot shows the Google Analytics interface for a property named 'myProjects'. The top navigation bar includes the 'Analytics' logo, the text 'All accounts > myProjects', and a search bar with the placeholder 'Try searching "top countries"'. Below this, the 'ADMIN' tab is selected, showing a list of properties. The first property is 'myProjects (35022...7)'. To the right of the property name is a blue button with a plus sign and the text 'Create Property'. A large blue arrow points from the bottom text box to this button. Below the property name, there are three menu items: 'Setup Assistant' (with a checkmark icon), 'Property Settings' (with a gear icon), and 'Property Access Management' (with a group of people icon). On the right side of the screen, the 'Data Streams' section is visible, with tabs for 'All', 'iOS', and 'Android'. Under the 'All' tab, there is a single data stream named 'myProjects' with a URL icon and the URL 'https://sites.google.com/alle'.

After the website analytics are “live”,  
click around on your site to make some activity.  
After a minute, this activity will register  
on the analytics dashboard



# Check the Dashboard



Spend some time to see what  
else is available on this dashboard!



# Complete the Setup

ADMIN

USER

Property

[+ Create Property](#)

myProjects (350227767)



☒ **Setup Assistant**

☐ Property Settings

☐ Property Access Management

☐ Data Streams

☐ Events

☐ Conversions

☐ Audiences

☐ Custom definitions

☐ Data Settings

☐ Data Import

## Setup Assistant

Set up these features to get the most out of your new property. Your smarter, more advanced data analysis awaits. [Learn more about the Setup Assistant](#)



0 / 12 marked complete

### Data collection

#### Collect website and app data

Collect event data by adding the Google tag to your web pages. [Learn more](#)

Not Started >

☒ Mark as complete

### Property settings

#### Turn on Google signals

Access aggregated data from people with Google accounts who allow Ads Personalization. [Learn ...](#)

Not Started >

#### Set up conversions

Identify the key user interactions most important to your business. [Learn more](#)

Not Started >

In the Setup Assistant, there are other settings to complete.



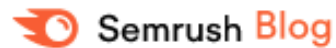
# Let's Play

- 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**



# In the Blog



SEO

Advanced  
SEO

Channels

Content

Marketing

News &  
Research

Channels / Analytics

## Google Analytics Tracking ID: Where It Is & How to Find It

Semrush Team Dec 30, 2022 5 min read

How do I manually add code to my website to add analytics?

# In the Blog



*Web analytics is often based on invasively collecting and aggregating user data. But web analytics doesn't have to be an invasion of privacy.*