

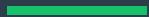
# Google Analytics



Project 6: Navigating, Reports,  
& Dashboards



# Part One: Primary Views & Filters





# 1. Best Practice Check: Three Primary Views

I use the **Google Merchandise Store Demo Account** which already has the three primary views created.

I do not have access to create those views, but the steps to create a view consists of these steps:

- Go to Admin
- Click the [+ Create View] button next to View - see screen shot below, notice the button is greyed out here because I can't create view in the demo account.

The screenshot shows the Google Analytics Admin interface. At the top, it says "Analytics | All accounts > Google Merchandise St... 1 Master View". Below that is a search bar with "Try searching 'Users today'" and a "Feedback" link. On the right are a bell icon and a grid icon. The main area has tabs for "ADMIN" (which is selected) and "USER". Under "ADMIN", there are sections for "Account" (with "+ Create Account" button), "Property" (with "+ Create Property" button), and "View" (with a "+ Create View" button that is highlighted with a red box). The "View" section also shows "1 Master View".

Industry best practice is to have three Primary views as below to serve three fundamental functionality:

1. Raw Data View – this is the base line view with no filter applied
2. Master View – this is the live production view and has filters applied
3. Test View – this is the test view prior work is rolled out to Master View.

The screenshot shows the Google Analytics dashboard. At the top, there are tabs for "All", "Favorites" (which is selected), "Recents", a search bar with "Search", and a "Visit Platform Home" link. Below that is a section titled "Analytics" with three items:

- Demo Account > Google Merchandise Store **3 Raw Data View** Tracking ID UA-54516992-1 No organization ★
- Demo Account > Google Merchandise Store **1 Master View** Tracking ID UA-54516992-1 No organization ★
- Demo Account > Google Merchandise Store **2 Test View** Tracking ID UA-54516992-1 No organization ★



## 2. Best Practice Check: Filtering Internal Traffic

The **Google Merchandise Store Demo Account** does not already have this filter created, and I do not have access to create this filter. The steps and illustrative screen shots are as below:

On Admin pane, under View, Select Test View.

- Click on [Filter], then [Add Filter] red button
- In the Add Filter to View form, select “Create new Filter”
- Enter a filer name such as “ Exclude internal traffic”
- Click [Custom] Under Filter Type
- In the Filter Field under the [Exclude] radio button, click [Select field] to search for IP address and select it
- In the Filter Pattern field, enter the internal IP address. If there are a range of IP addresses, enter an regular expression like `^231\.88\.156\.(1[1-9]|1[0-5])$` which will filter out IP range from [231.88.156.1] thru [231.88.156.15]
- Click [Save] Button
- Leave this filter in Test View (like 7-10 days) to ensure it is working as expected, before copy it to Master View.

Rank	Filter Name	Filter Type	
1	Exclude internal traffic	Exclude	<a href="#">remove</a>



# Data Exploration

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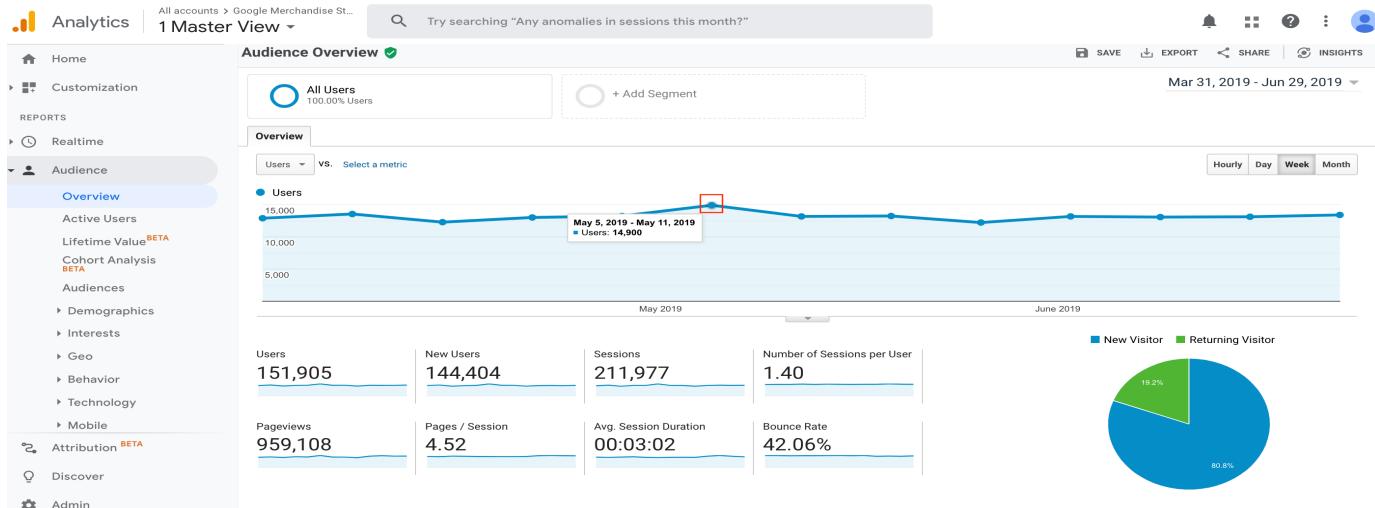


## Standard Display - Audience

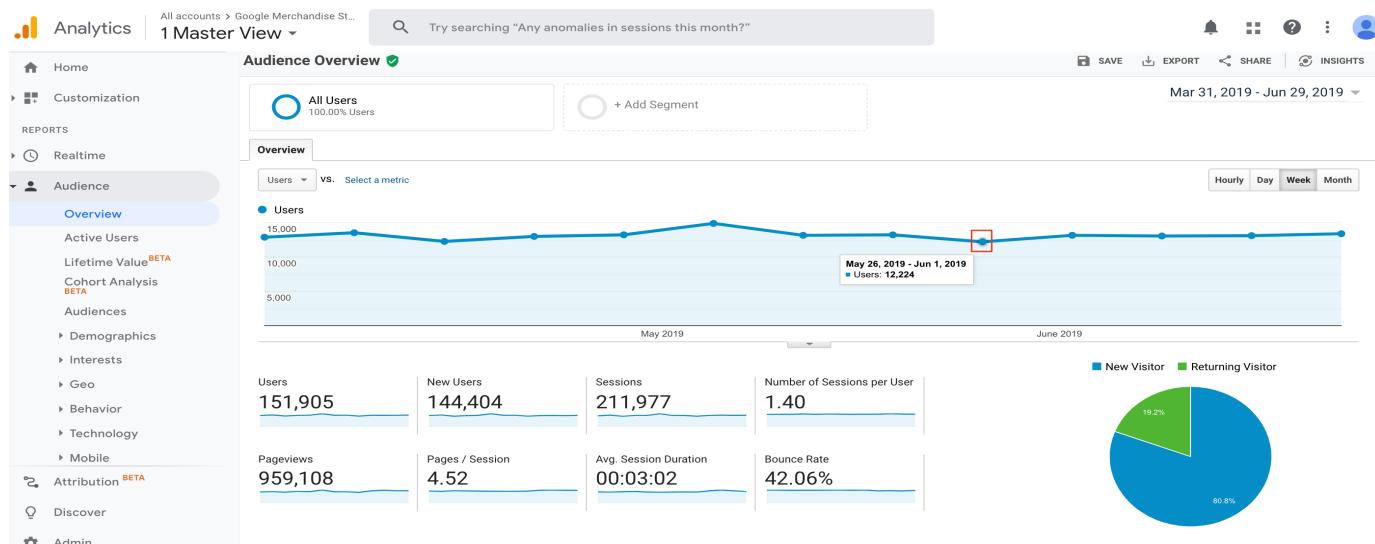
In the three month time period from Sunday 31<sup>st</sup> March to Saturday 29<sup>th</sup> June 2019, the number of visitors peaked in the week of 5<sup>th</sup> – 11<sup>th</sup> of May at 14,900 and dropped to the lowest in the week of 26<sup>th</sup> May – 1<sup>st</sup> June at 12,224.

### Audience: Overview Report (31/03/19 – 29/06/19)

Week 5<sup>th</sup> – 11<sup>th</sup> May 14,900 visitors



Week 26<sup>th</sup> May – 1<sup>st</sup> June: 12,224 visitors





## Standard Display - Audience

While I can't be certain why the number of visitors peaked in the week of 5<sup>th</sup> – 11<sup>th</sup> May, and then dropped to the lowest in the week of 26<sup>th</sup> May – 1<sup>st</sup> June by looking at just this Audience Overview report alone, I know that in the US, Cinco de Mayo was celebrated on 5<sup>th</sup> May, and Memorial Day holiday on 27<sup>th</sup> May. Both dates fit into the two weekly periods respectively.

It is likely the peak was related to shopping for Cinco del Mayo celebration, whereas Memorial Day is a long weekend to mark the start of US summer season, where most people would be traveling for leisure or visiting friends and families, thus not so much into shopping. Besides, the shopping would likely have been done in the preceding weeks.



# Standard Display: Acquisition

In the time period selected, excluding *Direct* and *(Other)*, which channels had the highest and lowest bounce rates and the highest and lowest eCommerce conversion rates?

## Acquisition: Overview Report (31/03/19 – 29/06/19)

Analytics All accounts > Google Merchandise St... 1 Master View Try searching "Any anomalies in sessions this month?" SAVE EXPORT SHARE INSIGHTS

Home Customization REPORTS Realtime Audience Acquisition Overview All Traffic Google Ads Search Console Social Campaigns Behavior Conversions Attribution BETA

All Users 100.00% Users + Add Segment Mar 31, 2019 - Jun 29, 2019

Primary Dimension: Conversion: Default Channel Grouping eCommerce

Top Channels

Bounce Rate

Conversions

Acquisition

	Users	New Users	Sessions	Bounce Rate	Pages / Session	Avg. Session Duration	Ecommerce Conversion Rate	Transactions	Revenue
1 Display	2,706			78.34%		00:03:02	0.00%		
2 Affiliates	4,110			59.25%			0.00%		
3 Social	5,958			56.98%			0.02%		
4 Organic Search	92,439			48.80%			0.16%		
5 Paid Search	4,724			33.67%			0.40%		
6 Direct	24,905			31.34%			0.18%		
7 (Other)	5,054			30.84%			0.13%		
8 Referral	21,838			24.92%			<0.01%		

To see all 8 Channels click [here](#).



## Standard Display: Acquisition

In the three month period selected, excluding *Direct* and *(Other)*, to see which channels had the highest and lowest bounce rates and the highest and lowest eCommerce conversion rates, I use the Acquisition Overview Report with Primary Dimension set to *Default Channel Grouping* and Conversion set to *eCommerce* (marked by the blue frame below “All Users” segment). The answers can be found quickly from the bar charts under Behaviors and Conversions as shown in the screen shot in the previous slide.

Bounce Rate is the percentage of single-page sessions with no interaction with the page and a 0 second duration. So the lowest is the best, and vice versa. The report shows that

- *Display channel had the highest Bounce Rate at 78.34%*
- *Referral channel had the lowest Bounce Rate at 24.92%*

eCommerce Conversion Rate is the percentage of sessions that resulted in an e-commerce transaction. So the higher the rate, the more completed transactions, and vice versa. The report shows that

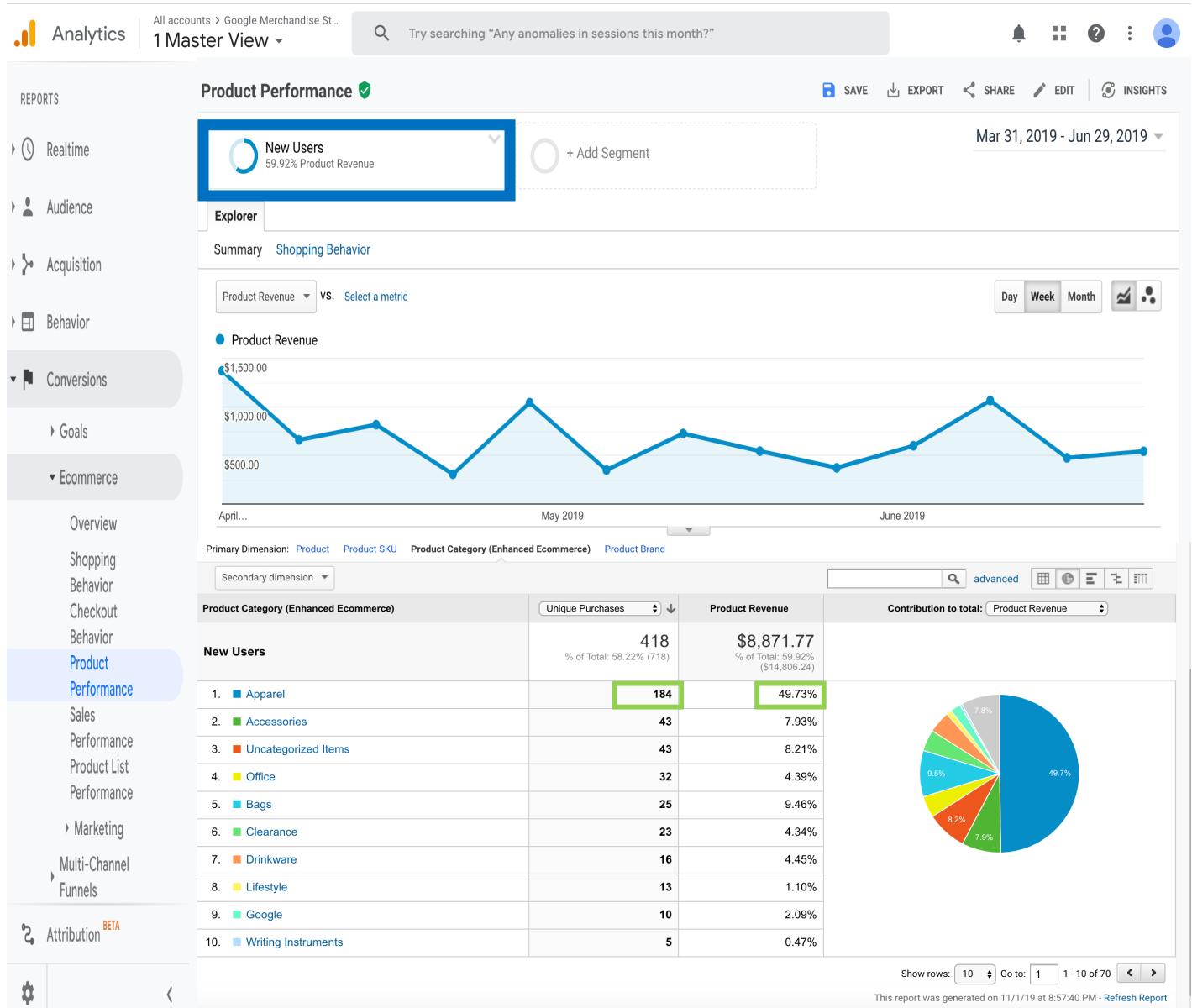
- *Paid Search channel had the highest eCommerce Conversion Rate at 0.40%*
- *Display and Affiliates channels had the lowest eCommerce Conversion Rate at 0.00%*



## Percentage Display: Conversion

In the three month period selected, which Product Category contributed the highest number of unique purchases for New Users and which Product Category was responsible for the largest percentage of revenue for New Users? (Screen shot only)

### Conversions Ecommerce/Product Performance Report (31/03/19 – 29/06/19)



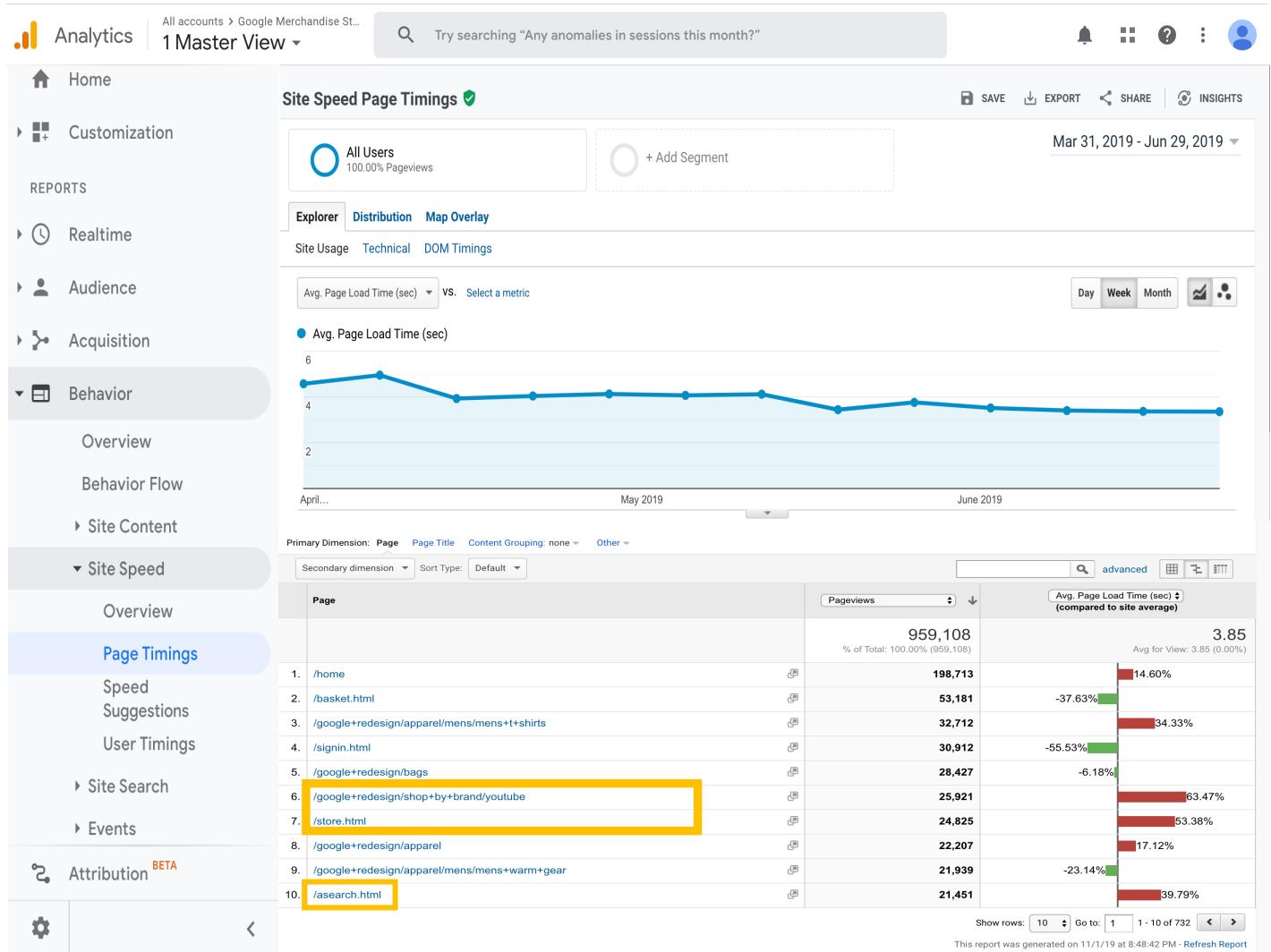


# Comparison Display: Behavior

For traffic from All Users the selected three month period select, please provide a comparison report showing Site Speed Page timings for our top ten pages (based on pageviews) and identify any potential troublespots.

## Behavior: Site Speed/Page Timings Report (31/03/19 – 29/06/19)

The report shows /google+redesign/shop+by+brand/youtube, /store.html and /asearch.htm performed badly, at 63.47%, 53.38% and 39.79% respectively slower than the site average. We could look at Speed Suggestions Report for optimization recommendations for these 3 sites.

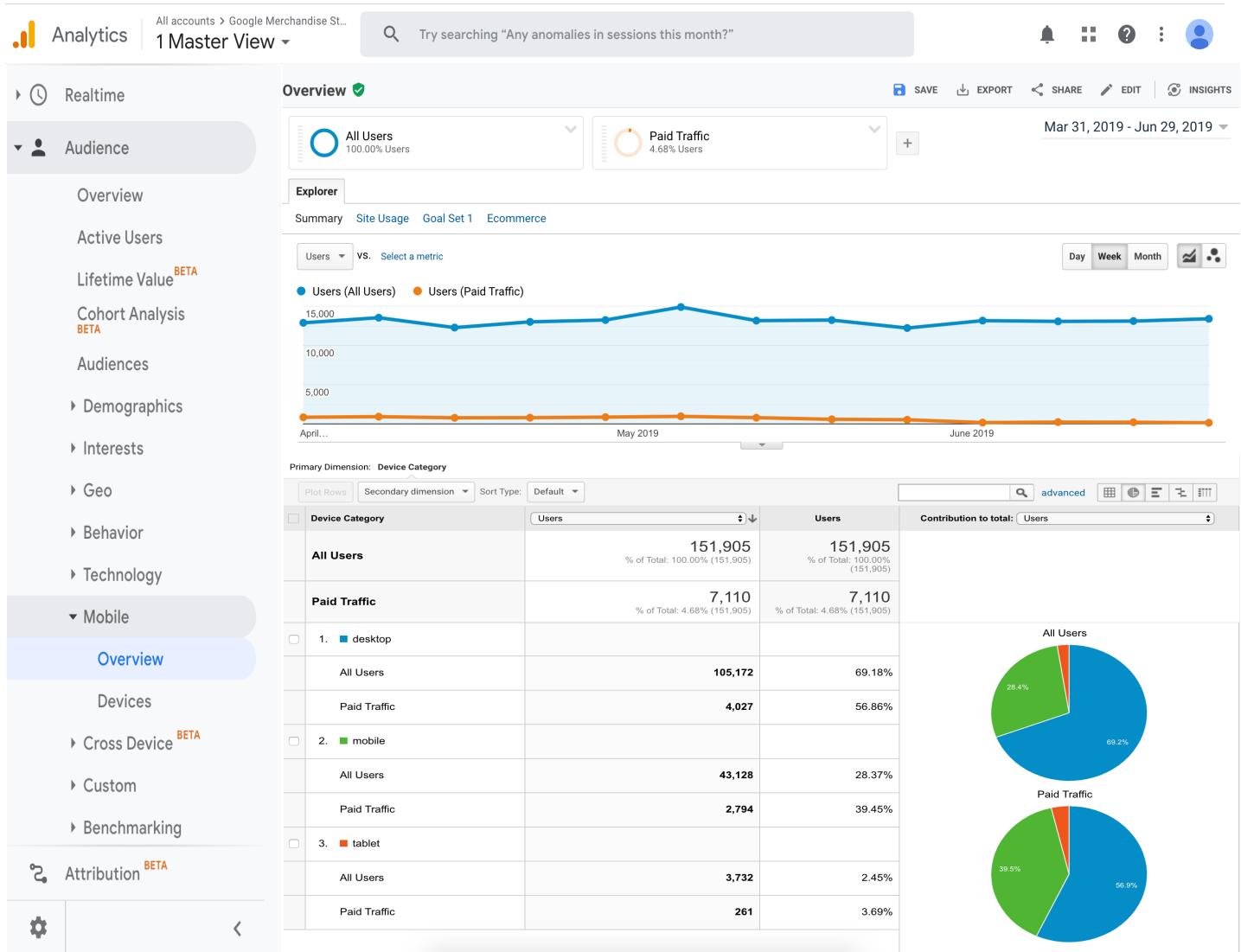




# Percentage Display: Audience

Please go into the Audience → Overview → Mobile report and provide a screenshot or screenshots that show the following: Between the start and end of the three month period selected, please provide percentage charts (pie charts) that show what percentage of All Users came from mobile, desktop, and tablet devices and what percentage of Paid Traffic Users came from mobile, desktop, and tablet devices.

## Audience: Mobile/Overview Report (31/03/19 – 29/06/19)





# Segmentation

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# Audience Segment: Characteristic

## Segment : English Speaking Users

The screenshot shows the Audience Segmentation tool interface. At the top, there is a header with tabs for 'Demographics', 'Technology', 'Behavior', 'Date of First Session', 'Traffic Sources', 'Enhanced Ecommerce', 'Advanced', 'Conditions' (with a count of 1), and 'Sequences'. Below the header, there are three main sections: 'Conditions', 'Summary', and 'Conditions' (under the 'Summary' section). The 'Conditions' section contains a filter builder with three OR conditions: 'Language exactly matches en-us', 'Language exactly matches en-gb', and 'Language exactly matches en-ca'. The 'Summary' section displays a donut chart showing '68.33% of users' (106,611 users) and 'Sessions 150,624 71.06% of sessions'. The bottom 'Conditions' section lists the applied filters: 'Language: "en-us"', 'Language: "en-gb"', and 'Language: "en-ca"'. There are also 'Save', 'Cancel', and 'Preview' buttons at the top.

This segment was created on English speaking users. The Summary shows this segment accounts for 68.33% of all users, so it is a significant user base. I can use it to answer questions like

- *How much eCommerce revenues come from this segment?*
- *What proportion of total eCommerce revenue come from this segment?*

A segment for non English speaking users can be easily created by excluding this segment and then the above questions can be extended to compare English speaking with non English speaking segments as well.

To keep the use case explanation concise, I would just apply this segment on the two questions above.



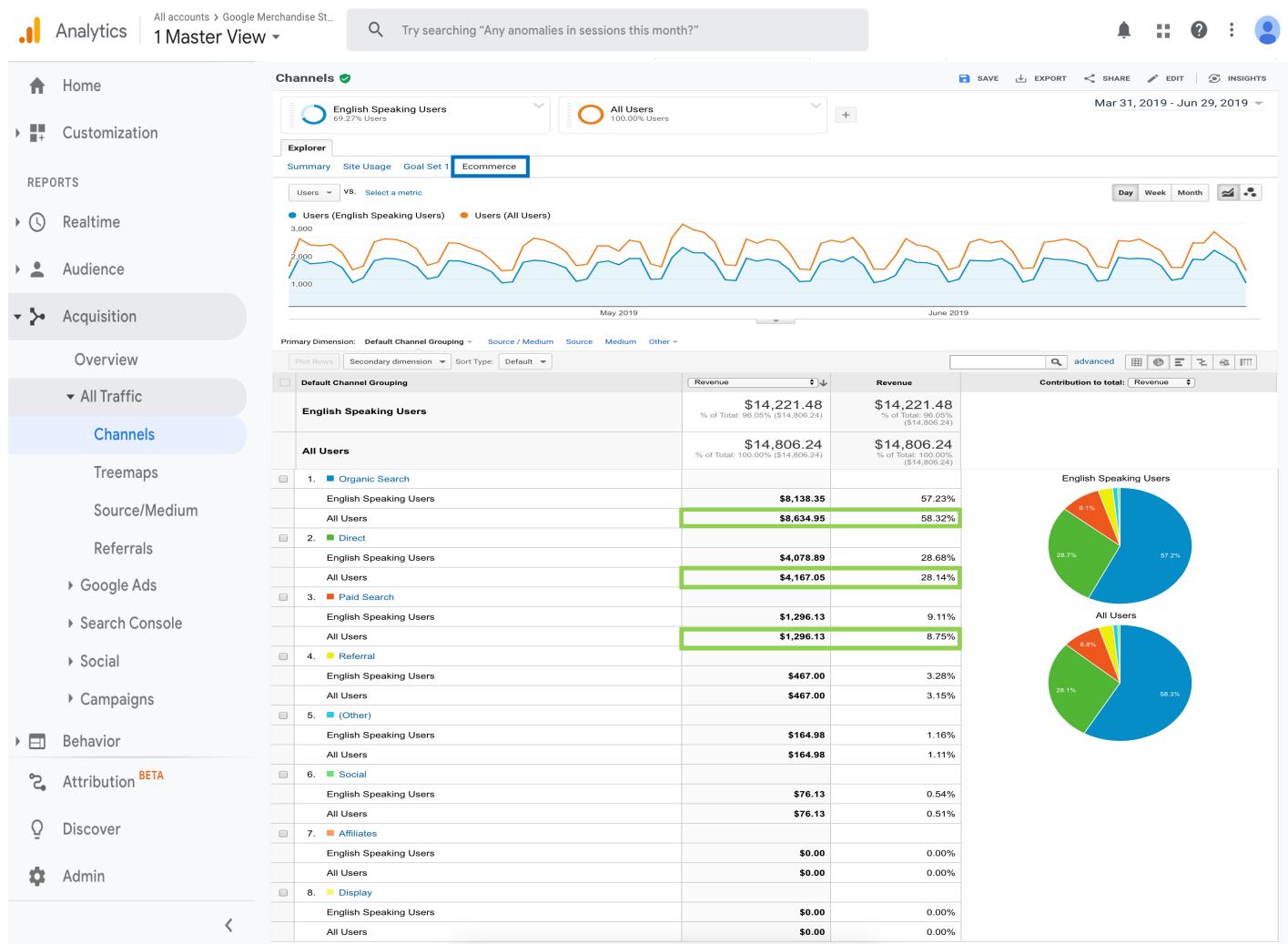
# Audience Segment: Characteristic

In the three month period selected, how much eCommerce revenues come from this segment and what proportion of the total eCommerce revenues is that?

## Acquisition: All Traffic/Channels Report (31/03/19 – 29/06/19)

The report shows total eCommerce revenue pulled in by this segment was **\$14,221.48** which is **96.05%** of the total. Breaking the numbers by channels, *Organic Search*, *Direct* and *Paid Search* rank the top three spots with **\$8,138.35 (57.23%)**, **\$4,078.89 (26.86%)** and **\$1296.13 (9.11%)** respectively.

The trend reveals English speakers are the major demographics of these 3 eCommerce channels for Google Merchandise Store.





# Audience Segment: Geography

## Segment : North America Users

The screenshot shows the 'Conditions' section of the 'North America Users' segment configuration. A filter is applied for 'Sub Continent' set to 'exactly matches' 'Northern America'. The summary indicates 47.27% of users (73,764) and 51.85% of sessions (109,920). The conditions listed are 'Sub Continent: "Northern America"'.

Conditions	
Segment your users and/or their sessions according to single or multi-session conditions.	
<b>Filter</b> <b>Users</b> <b>Include</b>	
Sub Continent exactly matches Northern America - OR AND	
+ Add Filter	

Summary	
<b>47.27%</b> of users	
Users 73,764	
Sessions 109,920	
51.85% of sessions	
<b>Conditions</b>	
Sub Continent: "Northern America"	

This segment was created on the North America Sub Continent. The Summary shows this segment accounts for 47.27 % of all users, so it is a significant user base. I am interested in finding out the significance of this segment to Google Merchandise Store. Hence, the following questions

- *What was the eCommerce Conversion Rate of this segment relative to other sub continents ?*
- *What was the Revenue relative to other sub continents ?*

I would apply this segment to Audience: Geo/Location Report to find out the answers.



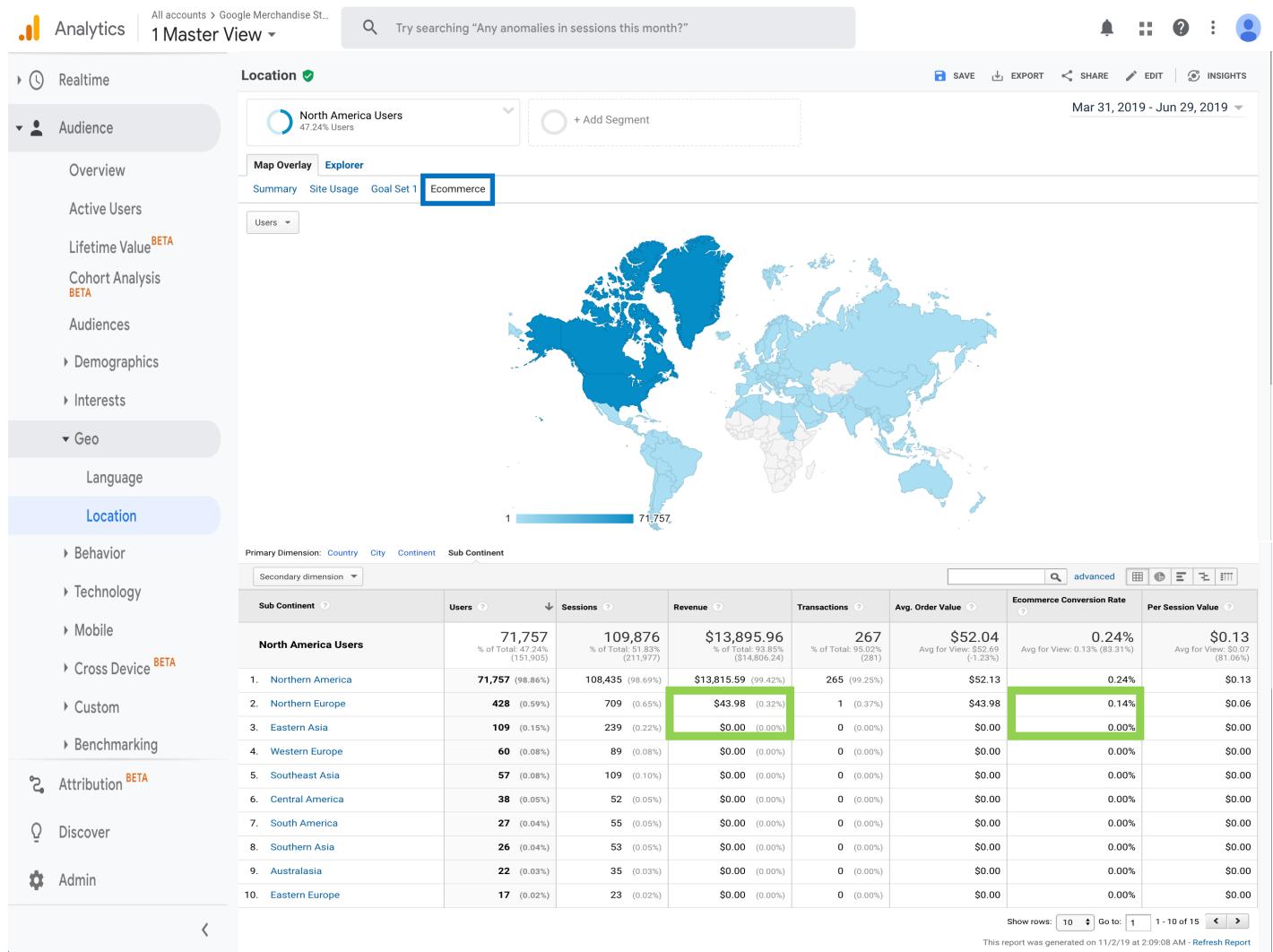
# Audience Segment: Geography

In the three month period selected, what was the *eCommerce Conversion rate* and *Revenue* of this segment relative to other sub continents?

## Audience: Geo/Location Report (31/03/19 – 29/06/19)

The report shows the eCommerce Conversion rate of this segment was **0.24%**, relative to Northern Europe's **0.14%** and the rest's **0%**. The Revenue from this segment. Northern Europe and the rest were \$13,815.59(99.42%), \$43.98(0.32%) and \$0 (0%) respectively.

The trend shows North America is the main market for Google Merchandise Store, which is not surprising given it is the birth place of Google and its brand name a household name there.



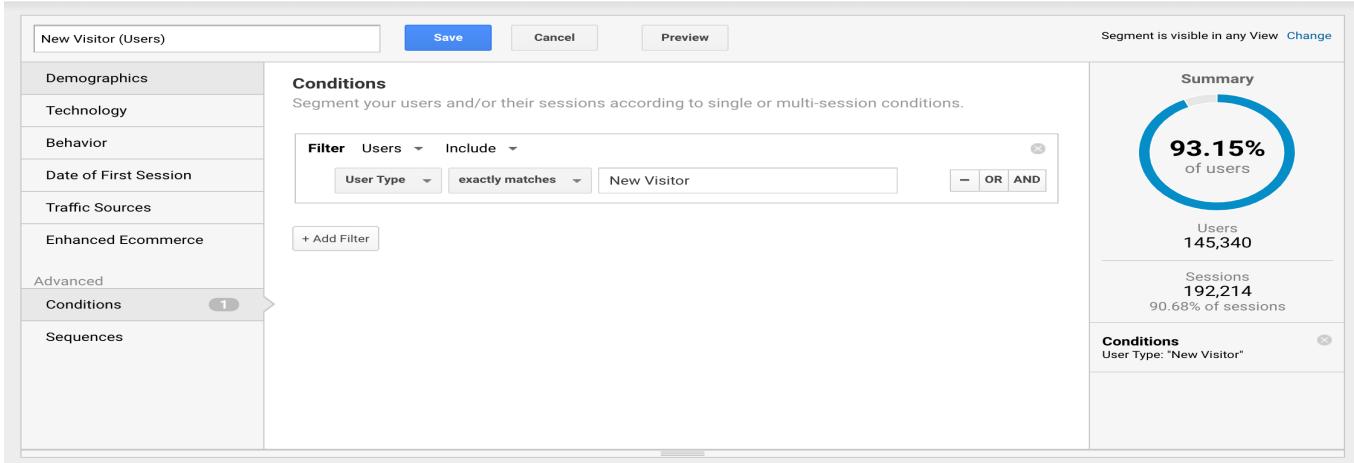
LEARN MORE [udacity.com/google-analytics](https://udacity.com/google-analytics)

This report was generated on 11/2/19 at 2:09:08 AM - Refresh Report

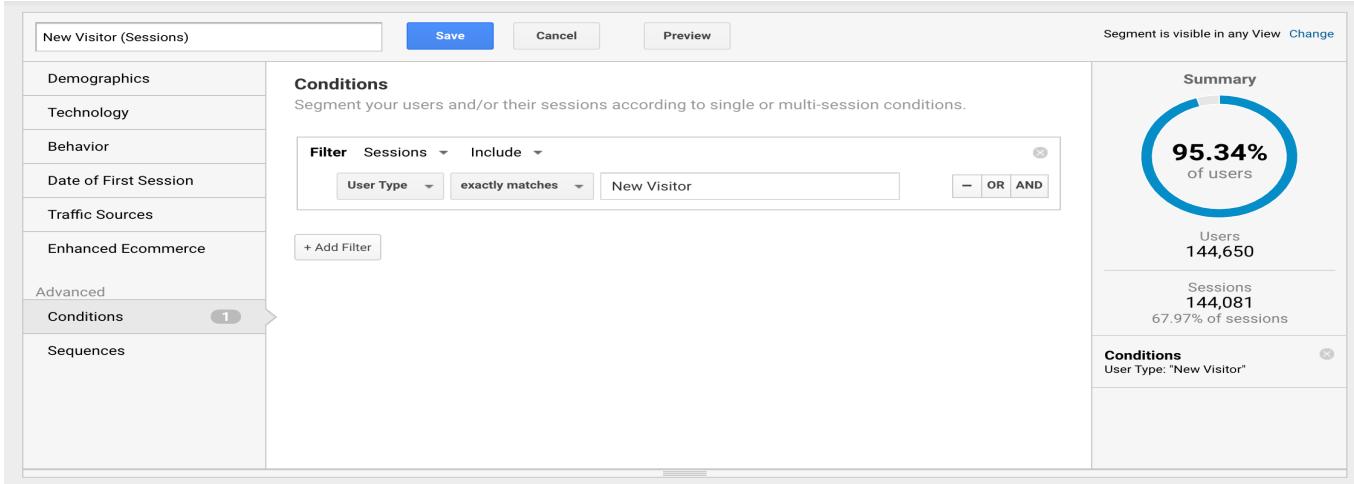


# Audience Segment: User Behavior

## Segment : New Visitor (Users)



## Segment : New Visitor (Sessions)



These two (user behavior based) audience segments were created base on user type New Visitor, but one with user scope and the other, session scope. They can be used to answer questions like

- *How much did New Visitor segment (user scope) contribute to Goal Conversion Rate?*
- *Is there a correlation between the two scopes of New Visitor segment's contribution to Goal Conversion Rate?*

I would apply the segments to Acquisition: All Traffic/Channels Report (select Goal Set 1 metric group tab in Explorer) to find out the answers.

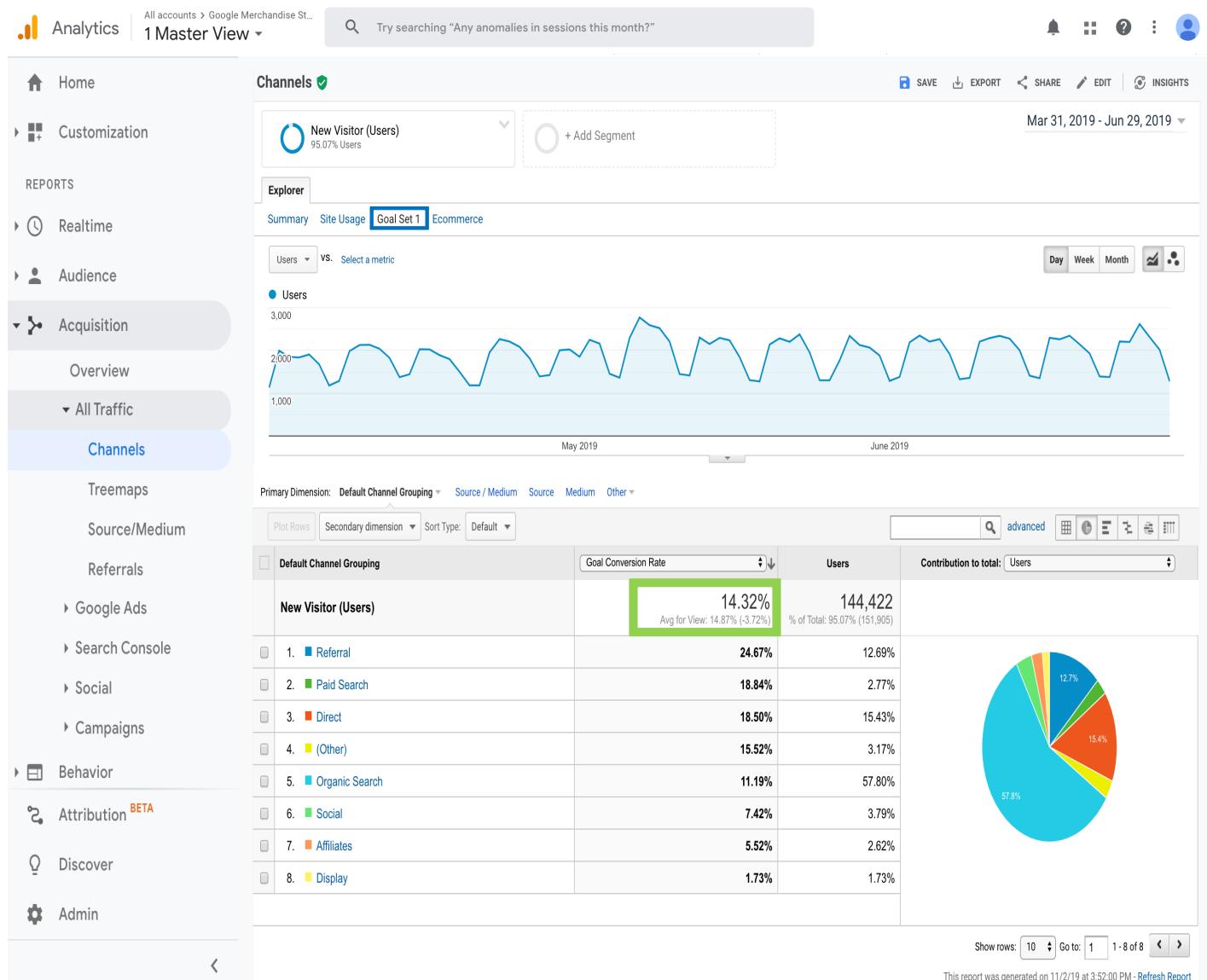


# Audience Segment: User Behavior

In the three month period selected, how much did New Visitor segment (user scope) contribute to *Goal Conversion Rate*?

## Acquisition: All Traffic/Channels Report (31/03/19 – 29/06/19)

The report shows this segment contributed **14.32%** of the total Goal Conversion Rate. Breaking this down by channels, **Referral**, **Paid Search** and **Direct** rank the top three spots with contribution rate of **24.67%**, **18.84%** and **18.50%** respectively.



LEARN MORE [udacity.com/google-analytics](https://udacity.com/google-analytics)

This report was generated on 11/2/19 at 3:52:00 PM - [Refresh Report](#)

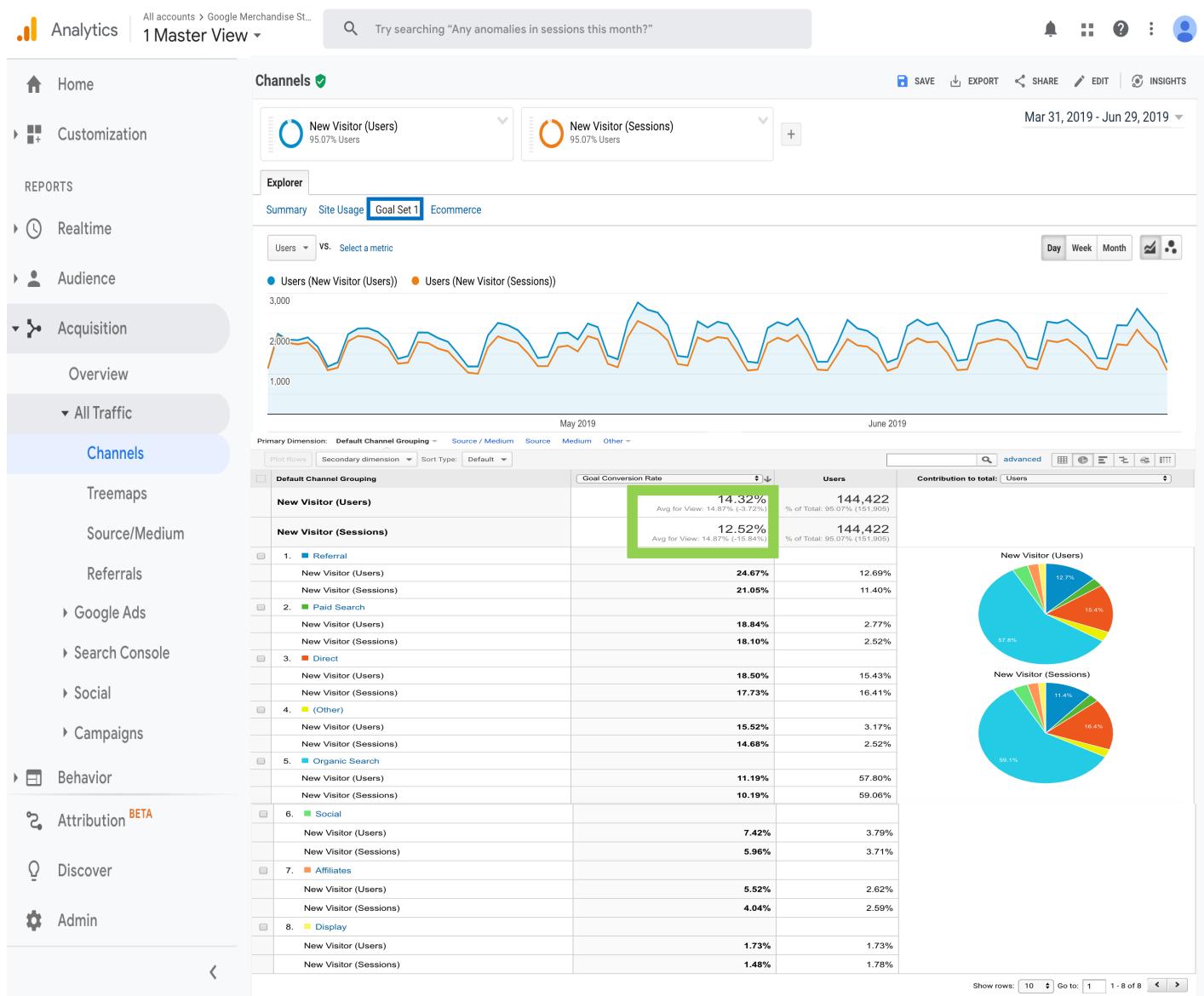


# Audience Segment: User Behavior

In the three month period selected, is there a correlation between the two scopes of New Visitor segment's contribution to Goal Conversion Rate?

## Acquisition: All Traffic/Channels Report (31/03/19 – 29/06/19)

The report shows a positive correlation between the user and session scopes of New Visitor Segment on Goal Conversion Rate. The same correlation is mirrored among the channels, where both scopes move in the same direction in New Visitor segment's contribution to Goal Conversion Rate.





# Part Two: Connecting a Data Source and Creating a Custom Dashboard

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# 1. Merchandise Store Draft Dashboard: Built on the Master View

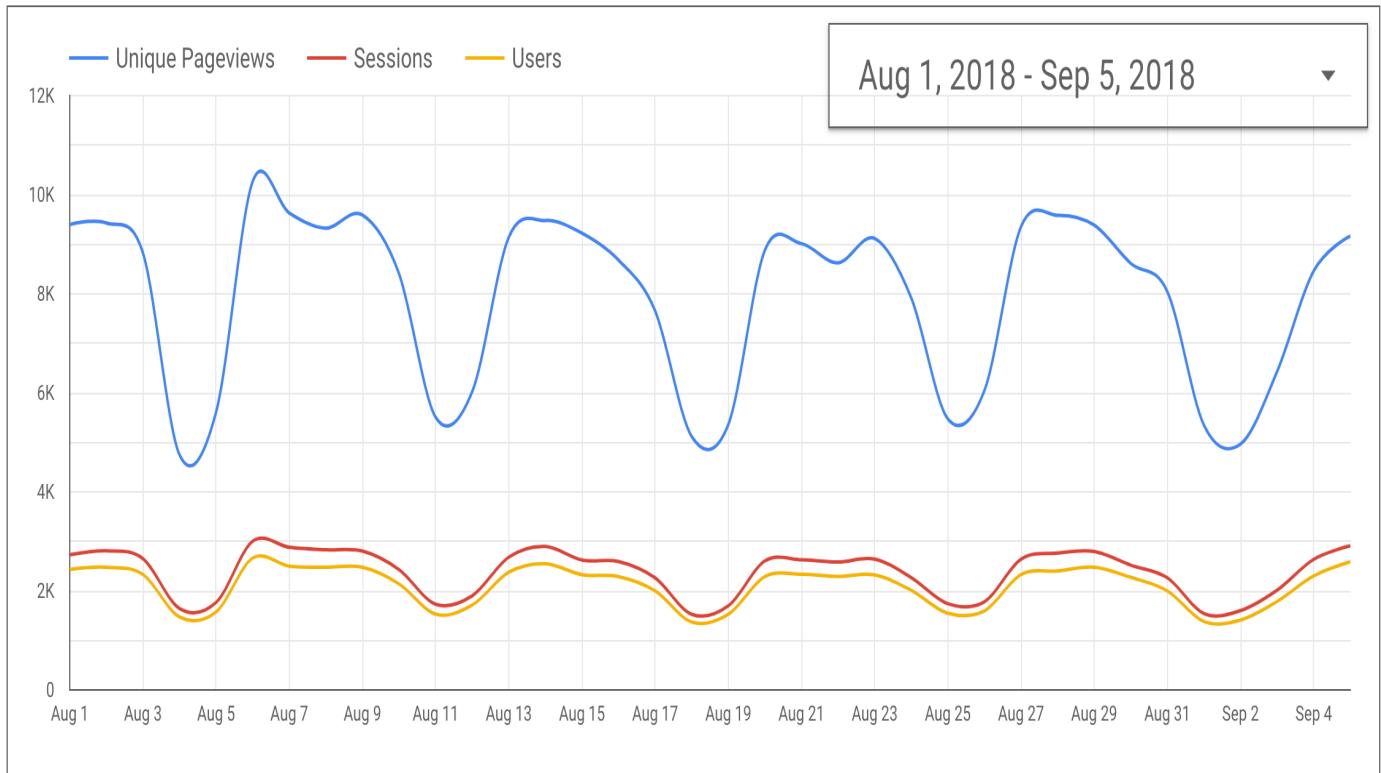
The screenshot shows the Google Data Studio interface. At the top, there's a navigation bar with 'Data Studio' and a search bar. On the right side of the bar are icons for help, settings, and user profile, along with a 'Switch products' button. Below the navigation bar, there are tabs for 'Recent', 'Reports', 'Data Sources' (which is selected and highlighted in blue), and 'Explorer'. To the left, there's a sidebar with 'Create' (with a plus sign icon), 'Recent' (selected and highlighted in blue), 'Shared with me', and 'Trash'. A message box in the center says: 'Over the next few weeks, your Data Studio files will be migrated away from Drive. No action is needed, your reports won't change, and the people you've shared reports with will still be able to access them. [Learn more](#)'. The main area shows a table with one item:

Name	Owned by anyone	Last modified
1 Master View	AUDREY TAN	Nov 7, 2019

This is the data source connection established using Google Analytics connector in Data Studio.

With this connection, visualizations can be built based on the Master View in Google Merchandise Store Demo account in Google Analytics.

## 2. Merchandise Store Draft Dashboard: Time Series chart



This is the Time Series chart of the trends on Unique Pageviews, Sessions and Users for the time period August 1st-September 5th, 2018.

The data source, dimension and metric details of the chart is as listed here:

In the time period selected, the chart shows:

- the trends on Sessions and Users closely mirroring each other
- all three metrics consistently showing a deep downward trend towards end of each week before recovering and peaking at the start of the next week.

**Date range Properties**

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**DATA**

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Default date range  
 Aug 1, 2018 - Sep 5, 2018

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**Data Source**

 1 Master View  BLEND DATA 

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**Dimension**

 Date 

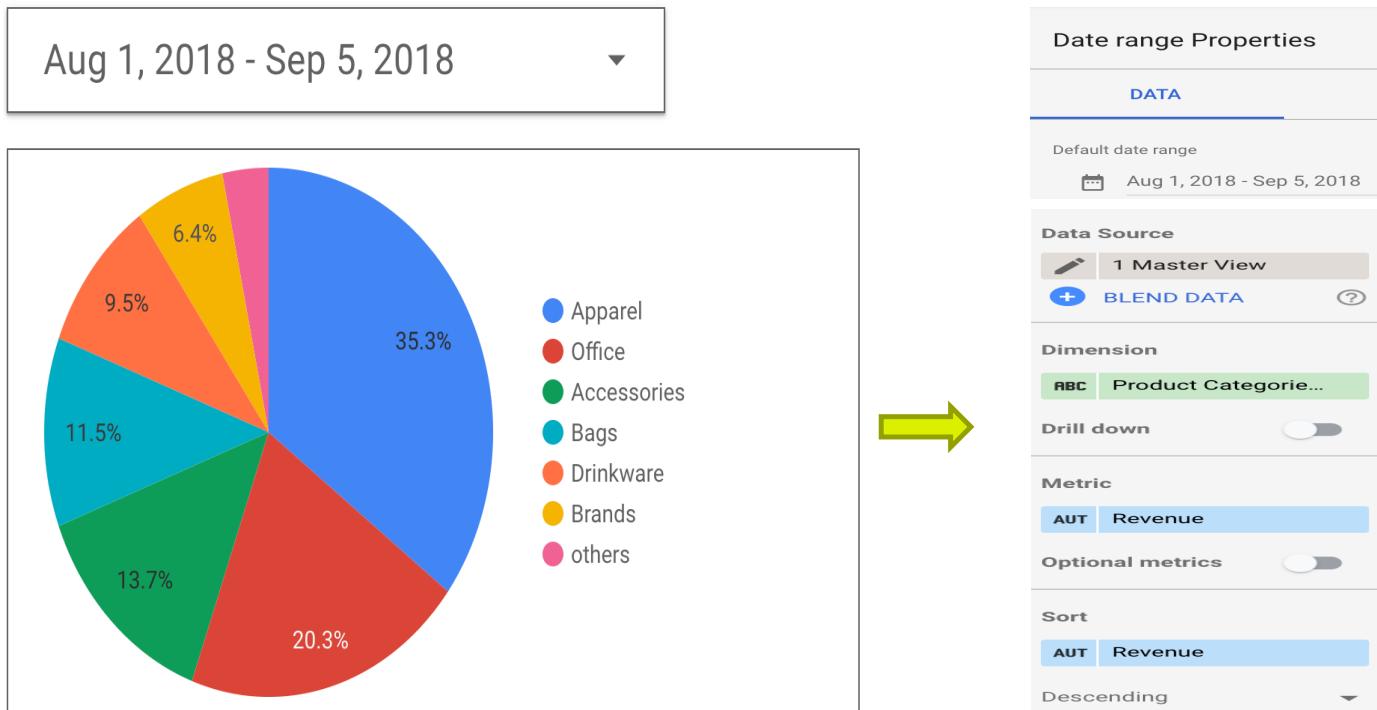
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**Metric**

AUT	Unique Pageviews
AUT	Sessions
AUT	Users



### 3. Merchandise Store Draft Dashboard: Pie chart, 7 slices



This is the 7-slice pie chart on revenue broken down by product categories during time period August 1st-September 5th, 2018.

The data source, dimension and metric details are shown next to the chart. Only 7 categories are represented on the chart.

Apparel, Office and Accessories are the top 3 revenue contributors.

Date range Properties

**DATA**

Default date range  
Aug 1, 2018 - Sep 5, 2018

**Data Source**  
1 Master View | BLEND DATA

**Dimension**  
ABC | Product Categories

**Drill down**

**Metric**  
AUT | Revenue

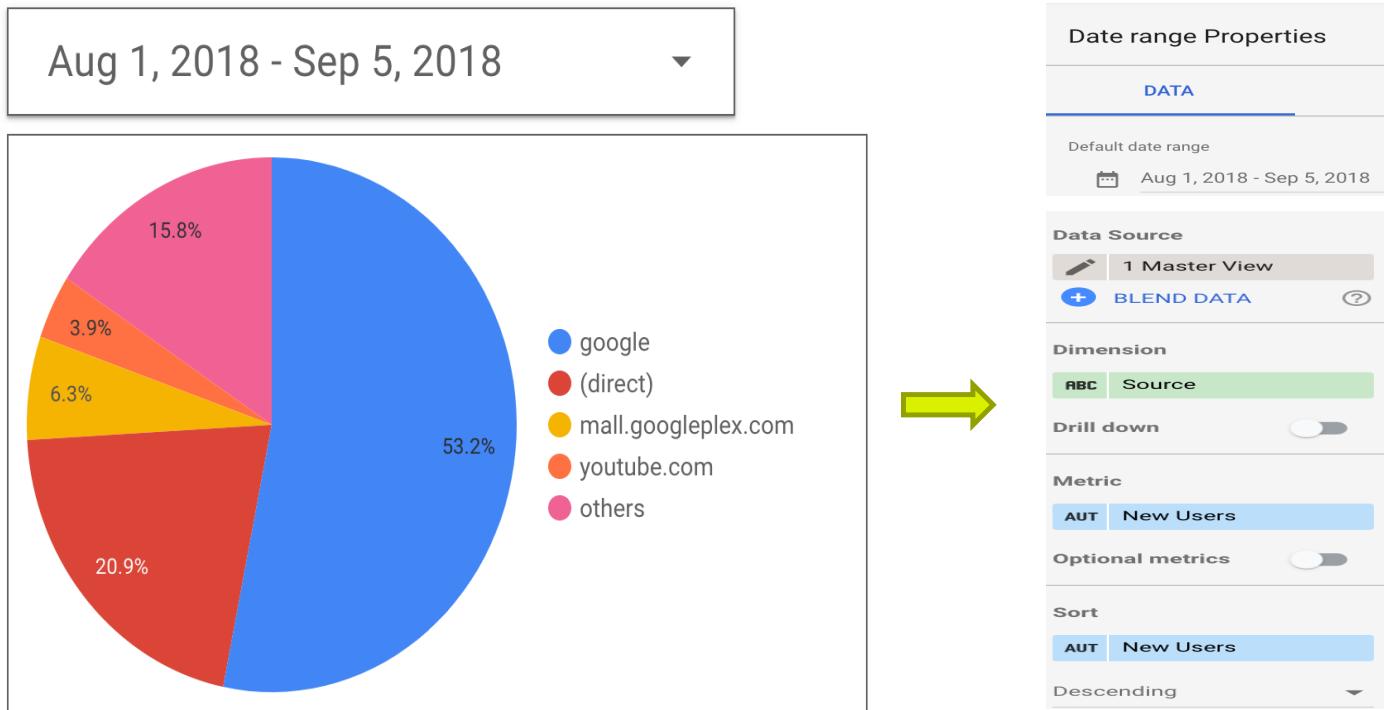
**Optional metrics**

**Sort**  
AUT | Revenue

Descending



## 4. Merchandise Store Draft Dashboard: Pie chart, 5 slices



This is the 5-slice pie chart on source broken down by new users during time period August 1st-September 5th, 2018.

The data source, dimension and metric details are shown next to the chart. Only 5 sources are represented on the chart.

Excluding Others (which comprises of all sources not explicitly named on the chart), Google, Direct and Mall Googleplex are the top 3 sources bringing new users to the site.



## 5. Merchandise Store Draft Dashboard: Scorecard



Date range Properties

**DATA**

Default date range  
Aug 1, 2018 - Sep 5, 2018

Data Source

1 Master View

BLEND DATA

Metric

Avg. Order Value

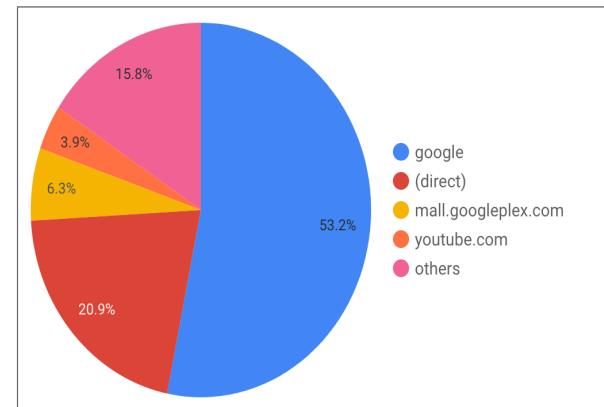
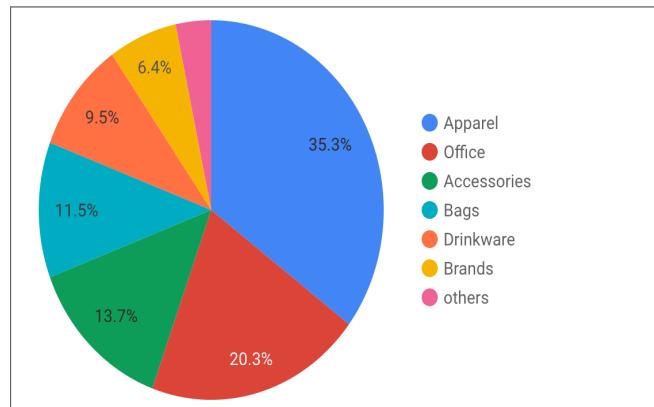
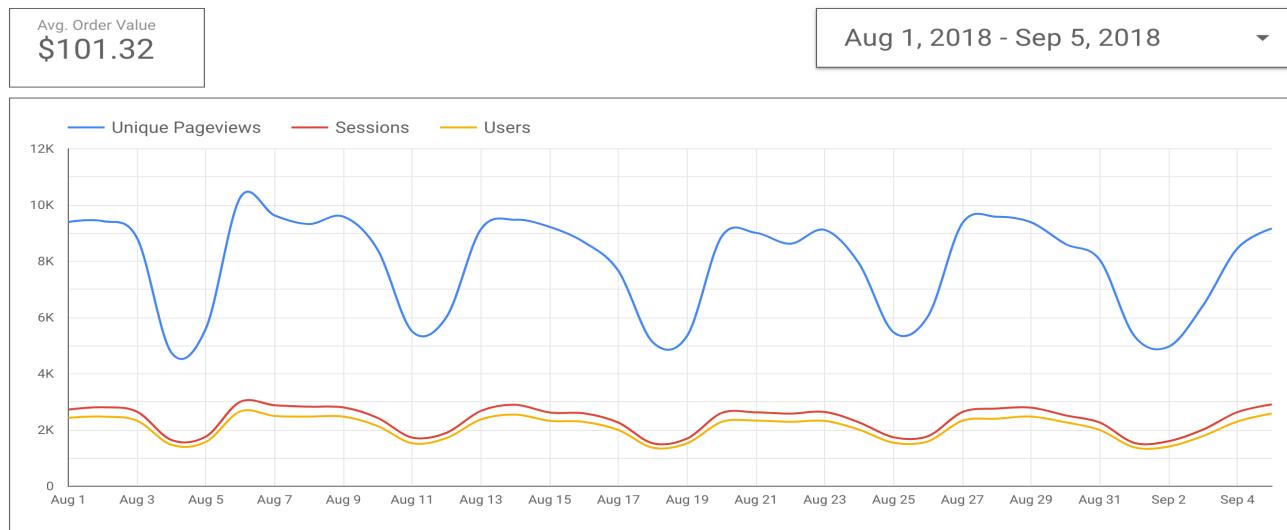
Optional metrics

This is the Scorecard chart on average order value during the time period August 1st-September 5th, 2018.

The data source, dimension and metric details are shown next to the chart.

The chart shows the average order value during the selected time period is \$101.32.

## 6. Merchandise Store Draft Dashboard: Date Range Control



The page has a Date Range Control that governs all of the charts, and set to the time period of August 1st-September 5th, 2018.

The configuration is shown here to the right: ➔

This control let us click on its drop-down arrow to a pick a different date range and see all the charts get updated dynamically to reflect the change applied. An example demonstrating this functionality is on the next slide.

Current Page Settings X

DATA STYLE

Data Source

1 Master View

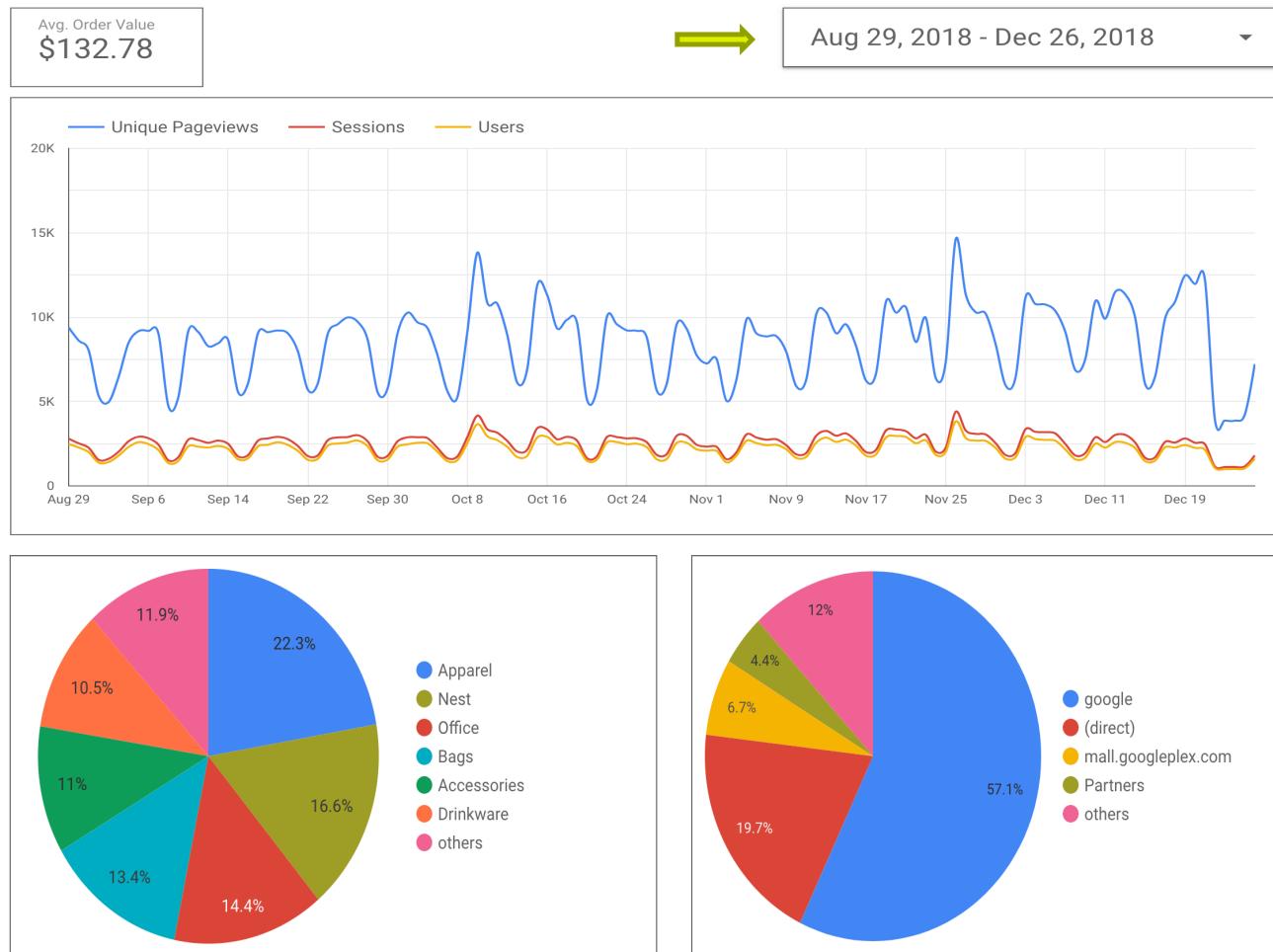
Default date range

Auto  Custom

Aug 1, 2018 - Sep 5, 2018 ▾



## 7. Merchandise Store Draft Dashboard: Date Range Control – Usage Demonstration



In this usage demonstration, I changed the Date Range Control to the time period of August 29<sup>th</sup> - December 26<sup>th</sup>, 2018. This drove all other charts on the page to be updated dynamically to reflect the effect of the change in date range:

- the trends in the Time Series chart changed to match the new date range
- average order value changed to \$132.78 (vs \$101.32 previously)
- the top 3 revenue contributors are now Apparel, Nest, Office (vs Apparel, Office and Accessories previously)
- excluding Others (represents all sources not explicitly named on the chart), the top 3 sources bringing new users to the site remain the same but their percentage contribution changed to 57.1%, 19.7% and 6.7% respectively (vs 53.2%, 20.9% and 6.3% previously)



# Marketing Analytics Nanodegree Program

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## Google Analytics