

# Intro to Google Analytics for UX

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# Web Analytics & UX

- Traditional research methods: small number of users are observed
  - "What problems do users encounter?"
  - "How do they understand the information presented?"
  - "Can users complete task X quickly?"
- Web analytics: observe behavior of large numbers of users
  - "Which pages are most/least visited?"
  - "How do mobile users differ from desktop users?"
  - "Is button X more effective in getting users to complete a purchase?"



# Google Analytics Basics

setup, terms



# Setup

```
<script>
(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){
(i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o),
m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-XXXX-Y', 'auto');
ga('send', 'pageview');

</script>
```

<https://developers.google.com/analytics/devguides/collection/analyticsjs/>



# Setup

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m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
})(window,document,'script','//www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-XXXX-Y', 'auto');
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# Universal vs Classic

- Set of improvements to tracking
  - Track users across devices/sessions/etc.
  - Android & iOS
  - Enhanced e-commerce tracking
  - Track links based on ID
- Upgrade Center



# Terms

metrics, dimensions, conversion rate, bounce rate...



# Metrics

Numeric measurements of user behavior

- Avg. time spent on page
- Pageviews/session
- Unique visitors
- % new visits

# Dimensions

Categories by which users can be grouped

- Location
- Browser
- New/returning
- Phone/tablet/desktop
- Screen size



**Visits:** instance of a user entering the site, doing something, and leaving

**Unique visitors:** number of unique visitors within the selected timeframe (based on cookie)

**Pageviews:** number of times a page is visited (multiple visits in a session are counted multiple times)

**Bounce Rate:** number of users who entered and left a page without visiting another page



# Learning About Users

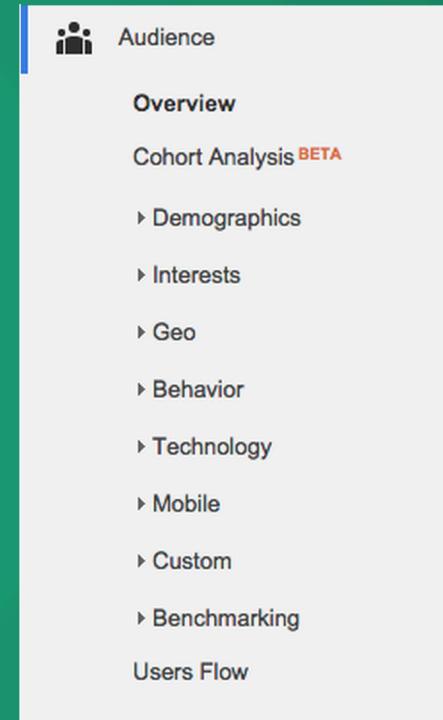
Visitor Analysis



# Visitor Analysis

- How many use screens smaller than 1280px?
- How many still use IE < 10?
- Is it worth it to put a lot of effort into a responsive site?

**Useful? Sure – but not that interesting**



# Some more interesting questions

- How do users come to the website?
- What are they really looking for?



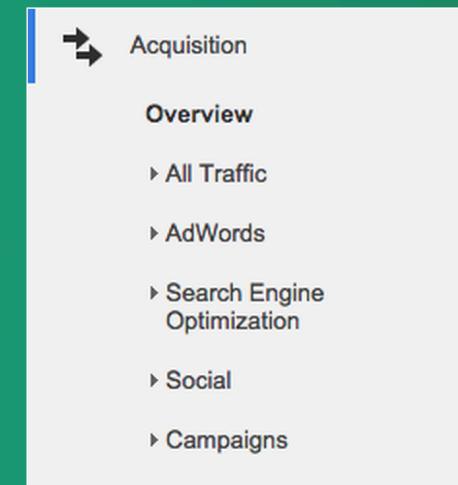
# Learning How Users Got to the Site

Traffic Analysis



# Source & Medium

- **Source:** URL or direct
- **Medium:** Type of source
  - Organic Search
  - Paid Search
  - Direct
  - Referral
  - Social
  - Email



# Accessing Search Keywords

- How do users find the website?
- How can we tailor to users' interests?
- Not available within GA anymore (since switch to SSL by default)
- Accessible via Google Webmaster Tools
- Only available for the past 90 days



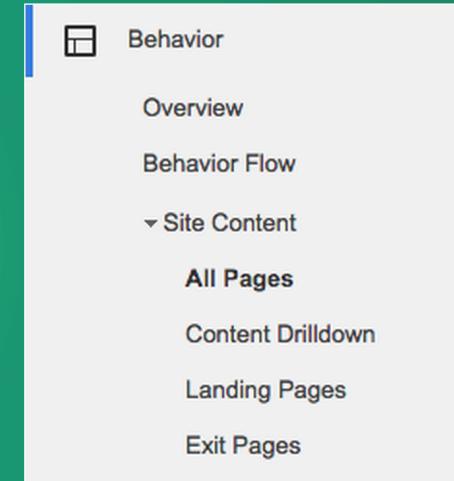
# Learning How Content is Used

Content Analysis



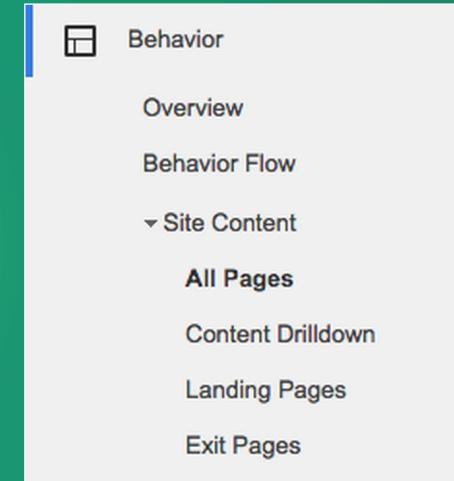
# Content Analysis

- High/low pageviews
  - Any pages deep in the hierarchy with high pageviews?
    - Do they have enticing link labels or are they landing pages?
    - Through which medium are users reaching the page?
  - Unique Pageviews much higher than Pageviews?
    - Users may not be finding what they are looking for (returning to the page many times in a sess.)



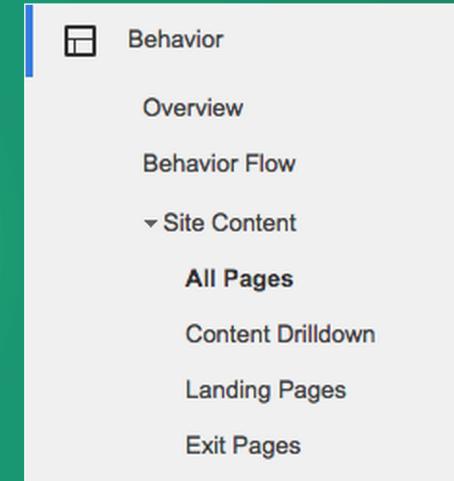
# Content Analysis

- Low time on page
  - Content not matching expectations
  - Content not interesting
  - **Content well organized and questions answered quickly**
- High Entrances vs Unique Pageviews
  - Page is often an entry point for users (linked to from another site?)
  - May rethink structure/hierarchy of the page



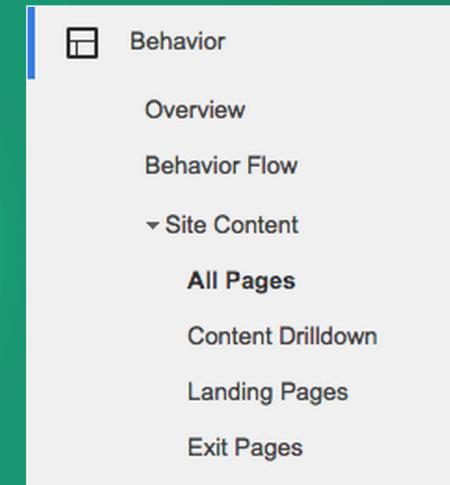
# Content Analysis

- High Bounce Rate/High % Exit
  - Compare using "Comparison" view
  - Users either find what they're looking for on that one page or don't think your site is relevant
  - May be caused by inappropriate links from other sites
  - What next? Usability test or expert judgment



# Content Drilldown

- Explore pages in hierarchical roll-ups
- Useful if your site is organized in logical hierarchy
- View metrics aggregated for each directory



# Learning How Users Move Between Pages

Behavior Flow Analysis



# Behavior Flow Analysis

- Complete picture only possible for small number of pages (5-10, maybe)
- Instead, focus on page-to-page relationships
  - Where did users come from
  - Where did they go
- Useful in planning usability tests (try to find unexpected pages and then use the test to find out the thought process leading to the behavior)



# Behavior Flow Analysis

- Two different reports for this information:
  - Behavior > Site Content > All Pages > Navigation Summary: Previous and Next Page Path
  - Behavior > Behavior Flow: Flow of users around one specific page (limited usefulness for unguided exploring)



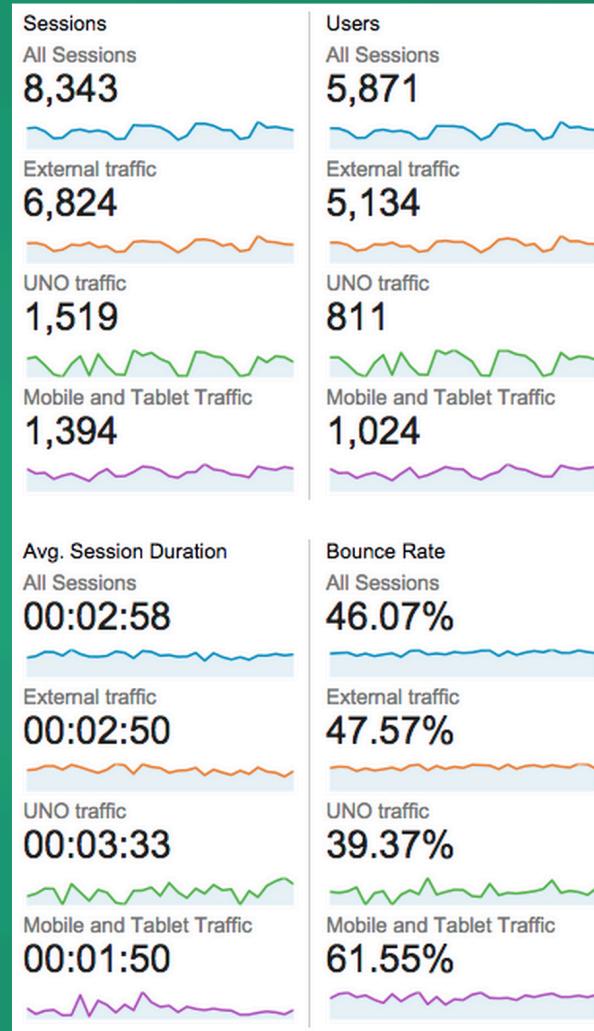
# Learning How Groups of Users Differ

User Segmentation



# User Segmentation

- Compare behaviors groups of different users
- Based on, e.g.
  - internal vs external
  - location/language
  - returning vs first time
  - desktop vs tablet vs phone
  - medium/source



# User Segmentation for UX

Did users behave differently if they ...

- visited page X (e.g. more likely to complete a purchase)
- entered through page X?
- entered through a link in an email?
- entered through a paid ad?
- visited the careers page?



# Advanced Topics



# Tracking Custom Actions

```
ga('send', 'event', 'category', 'action', 'label');
```

- Use custom JS to track any user action
- Useful for tracking outbound destinations and in-page actions
- Can be linked to conversions/assigned a value
- Group by category, action, and label
- More info on [developers.google.com](https://developers.google.com/analytics/devguides/collection/gajs/v1/advanced/custom-dimensions)



# Conversions

A sequence of actions you want users to take on your website because they provide value to the business

- Add items to cart > review order > fill in details > submit order
- Review information > sign up to receive further info

# Goals

"Finish line" for a conversion



# Custom dashboards

- Metrics by geographic region
- Compare new designs to old versions
- Exits and custom events
- Metrics by directory (e.g. department)



# Single-Page Apps

- Angulartics
- Ember
- Backbone
- ...



# GA ♥ UX

Integrating Google Analytics into the UX portfolio



# Personas

(descriptions of archetypical users)

- Segmenting based on personas
  - May be difficult to find appropriate criteria
  - Be able to answer specific questions by persona, not just overall
- Building better personas
  - Use analytics data to build more realistic personas based on actions/common paths/characteristics
  - Iterative process of building segments and adjusting them based on results



# Usability Testing

(testing an interface on actual users)

- Test planning
  - Use analytics to identify problematic pages/flows and focus testing on these areas
- Test analysis
  - Compare usability test results to analytics data (larger user group)
  - Incorporate analytics data into test reports



# Usability Inspections

(formal evaluation of interfaces)

- Test planning
  - Use analytics to identify problematic pages/flows and focus testing on these areas
- Test analysis
  - Use inspection to determine reason for problems (analytics can only tell you that there is a problem)

