Website (Fluid-Design)

Software Development Documentation

Fluid Design (HTML5 / CSS3 /jQuery /PHP)

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Introduction

Most Web Designers are torn between the choice of using a fluid, fixed, hybrid or elastic web design. As the second day of the new year rolls in and as part of my new year resolutions, I have promised to create a mock-up using each tech that I'm conversant with and make it available on my GitHub page. Last year was a very busy one and although I'm still on vacation travelling till on Friday (the first Friday in 2017), I'll try to code whenever I get time and push to GitHub that way I'm sure people will see my uncompleted code and thus motivate myself to finish it.

I have used my familiy's farm in Kenya as an example or inspiration in making this website. Apart from been a medical doctor, my fathers passion was in farming. He did that on the side as an hobby which turned out to be a business and a very prolific one for that matter. He was sought after by brokers who would buy his farm produce (fruits) for less and later sell them for profit. It was difficult for him to venture and create a rapport with clients overseas because internet connectivity was still evolving in that part of the world, but times have changed.

Farmers now have a clear idea of how much their raw materials (fruits, coffee, tea, cocoa, etc) fetch not only locally, but in the international markets. They can fathom how to add value in their products with the cons and pros of selling raw materials as opposed to selling processed products. This for instance will cost more than this because there is value added in it.

When I was studying Entrepreneurship at Mtech , one of my professors at the time, Prof. James Green stressed so much about the Customer Development Process (CDP). He said that during CDP, you must have a functional way to search for your customers and in retrospect, I have validated all his lectures in real life situations. There is a reason as to why many companies today are opting to use Social Media to direct potentials customers to their websites in order to close sales.

Statistical estimates show that the number of worldwide social media users reached 1.96 billion in 2016 and is expected to grow to some **2.5 billion** by 2018. In a nutshell, I would say that any company which is willing to scale should venture into tech because as it gets inculcated and interwoven in our lives, you get to reach more customers and you get to know WHO they really are, which takes me the next point which is Google Analytics (GA) and Adwords.

GA is the most powerful web analytics tool on the planet as of the time of writing. It's free, very user friendly, easy to set-up, no coding required, it's from a reputable company (**Google**) and above all it's evolving with the current tech and market trends. (*Current Version is* **Google Analytics 5**)

I consider this simple website project as **GA ready** because it's **SEO optimised**. I wont go into depth about GA, but below are some reasons as to why you may consider using it:

1. Get info on who uses *Mobile Device* for your website and thus create a *Responsive Design*.

2. Know who visits and doesn't close a sale in an *E-Commerce store*.

3. In a *Multi pages* website, you can identify which pages ARE, are NOT or are RARELY visited.

4. Know demographics of your visitors.

5. Know your trending products or pages.

6. Know which marketing strategy is efficient eg FB, Twitter, etc.

7. Get detailed analytics data from your online businesses .

Why Fluid Design

Fluid layouts use relative measurements and respond to the width of the viewport while Fixed layouts use static measurements and do not respond to the width of the viewport.

If you try to open this website in different mobile devices, you'll see how it adopts well with the devices screen. No need to pan in order to view content. I've used a different stylesheet (grid.css) to deal with that not only for SoC as a design principle but as a point to stress how responsiveness is vital.

Fluid Designs are much more user-friendly and they are rendered well across all browsers. They load faster in slow connections and images are appealing without degradation in both mobile devices and desktops.

It's easy to get full control of the website and paddings are similar across all browsers. For designers who rely mostly on plugins or platforms like Bootstrap, this environment may not be good for them because a good grasp of vanilla coding in HTML and CSS is of paramount importance for the functionalities to take effect.

Technologies Used in Development

HTML5

HTML (Hypertext Markup Language) is a markup language used to format content for it to be readable on a browser. Browsers display such content and examples include Chrome, Firefox, Safari, Opera, IE etc; such content is fetched and displayed via a URL/URI.

The HTTP protocol ensures data communication within the internet. It supports POST(accept and store data), GET(data retrieval) among other requests like HEAD, DESTROY/DELETE, PATCH etc which form the foundations of RESTful architecture.

Information on webpages is reinforced by the HTML Semantics which ensure a compatibility between new and old browsers. Complex web API's are well supported and it's "buoyancy" in disposition has seen it embrace new technologies like SVG, Video Streaming, Audio, as well as the adoption of new syntaxes.

Below is a typical HTML code used in this project.

```
34    <!-- Header Starts here... -->
35    <header id="header" class="">
36        <nav>
37            <div class="row">
38                <img src="resources/img/logo2.png" alt="Mango logo" class="logo">
39                <img src="resources/img/logo_nav.png" alt="Mango logo" class="
                   logo_nav">
40                <ul class="main-nav js--main-nav">
41                    <li><a href="#features_joe">Mangoe  Products</a></li>
42                    <li><a href="#jose_working">How it Works</a></li>
43                    <li><a href="#mwania_distribution">Supply Chain</a></li>
44                    <li><a href="#jipange_tukutane">Sign  up</a></li>
45                </ul>
46                <a class="mobile-nav-icon js-josembi-icon"><i class="ion-navicon-
                   round"></i></a>
47            </div>
48
49        </nav>
50        <div class="embe-text-box">
51            <h1>Welcome <br> to Mwania's Orchard</h1>
52            <a class="bonyeza bonyeza-yote js-josembi-scroller-to-ksh" href="#">
                Nataka embe</a>
53            <a class="bonyeza bonyeza-roho js-josembi-scroller-to-start" href="#">
                Nionyeseko</a>
54        </div>
55    </header><!-- /header -->
56
57    <!-- Start of Feature Section -->
58
59    <section class="section-features js-josembi-sec_features" id="features_joe">
60        <div class="row">
61
62            <h2>Mango Products &mdash; and fruits...</h2>
63            <p class="long-copy">
64                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do
                   eiusmod
65                tempor incididunt ut labore et dolore magna aliqua. Ut enim ad
                   minim veniam,
66                quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea
                   commodo
67
68            </p>
69        </div>
70
71        <div class="row  js-josembi-wp1">
72            <div class="col span-1-of-4 sanduku">
73            <i class="ion-ios-calendar-outline icon-noma"></i>
74                <h3>Dual seasons/year</h3>
75                <p>
76                    Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed
                       do eiusmod
```

CSS3

[CSS stands for Cascading Style Sheets](#). It's a style language which is used to style documentation written in HTML. This tech is not only used in HTML but extends to XML, SVG and XUL.

CSS is very versatile in that it can be used to style inline HTML as well as being rendered from outside through SoC. Many stylesheets can be linked to the main HTML page enhancing collaboration and code readability.

Below is a typical CSS3 code.

```css
.section-plans {
    background-color: #f4f4f4;
}

.plan-box {
    background-color: #fff;
    border-radius: 5px;
    width: 90%;
    margin-left: 5%;
    box-shadow: 0 2px 2px #efefef;
}

.plan-box div {
    padding: 15px;
    border-bottom: 1px solid #e8e8e8;
}
.plan-box div:first-child {
    background-color: #fcfcfc;
    border-top-left-radius: 5px;
    border-top-right-radius: 5px;
}

.plan-box div:last-child {
    text-align: center
    border: 0;
}

.plan-price {
    font-size: 200%;
    margin-bottom: 10px;
    font-weight: 100;
    color: #e67e22;
}

.plan-price-order span {
    font-size: 30%;
    font-weight: 200;
}

.plan-price-order {
    font-size: 80%;
}
```

jQuery

jQuery is a Javascript library that enhances script composition from the designer/developer coding environment. It's super fast and amazing at event handling, animation, document traversal, Ajax and if you write API's constantly, then jQuery can come in handy instead of using vanilla javascript.

It's DOM element selection has lead to insights in creating other javascript frameworks tailored at specific needs. It has many contributors with over 6000 commits on it's GitHub page at the

time of writing, and big multinationals like Nokia and Microsoft bundle it on their platforms eg ASP.NET, AJAX, Visual Studio etc.

Using jQuery to code has been very rewarding as it solves many a problem with less pain saving a lot of time and thus enhancing productivity in the long run.

It's open-source and released under MIT License.

See img below for some jQuery scripts used in this project.

```
// Code for sticky nav
$('.js-josembi-sec_features').waypoint(function(direction){
  if (direction == "down") {
    $('nav').addClass('sticky');
  }else {
    $('nav').removeClass('sticky');
  }
}, {
    offset: '60px'
 })

// Scroll on buttons

$('.js-josembi-scroller-to-ksh').click(function(){
  $('html, body').animate({scrollTop: $('.js-josembi-pricing').offset().top}, 1000)
})

$('.js-josembi-scroller-to-start').click(function(){
  $('html, body').animate({scrollTop: $('.js-josembi-sec_features ').offset().top}, 10
})

// Navigation scroll (smoothifying)

$(function() {
  $('a[href*="#"]:not([href="#"])').click(function() {
    if (location.pathname.replace(/^\//,'') == this.pathname.replace(/^\//,'') && loca
      var target = $(this.hash);
      target = target.length ? target : $('[name=' + this.hash.slice(1) +']');
      if (target.length) {
        $('html, body').animate({
          scrollTop: target.offset().top
        }, 1000);
        return false;
      }
    }
  });
});

// Animations on scroll

$('.js-josembi-wp1').waypoint(function(direction){
  $('.js-josembi-wp1').addClass('animated fadeIn');
}, {
  offset: '50%'
});

$('.js-josembi-wp2').waypoint(function(direction){
  $('.js-josembi-wp2').addClass('animated zoomInUp');
```

Adwords and SEO

I wont go in depth about Adwords and SEO but in a nutshell, it does provide you with a lot of information regarding your website visitors. Whenever I'm designing a website, I make sure that it's SEO ready. That means that the google Crawler or Bot does rank your website in the google search engine; you can benefit more if your website is linked to a google analytics account.

There are a lot of things that can put your business in a competitive edge if you use google analytics and if your website is well optimised.

If I were to search for **Sennheiser headphones** under google images for instance, if my business is into headphones, I would make sure my image is of a high resolution, is responsive and it indeed does show on the first page of the google search results. For instance, this image can increase conversion rates much faster than this one of lower resolution and size.
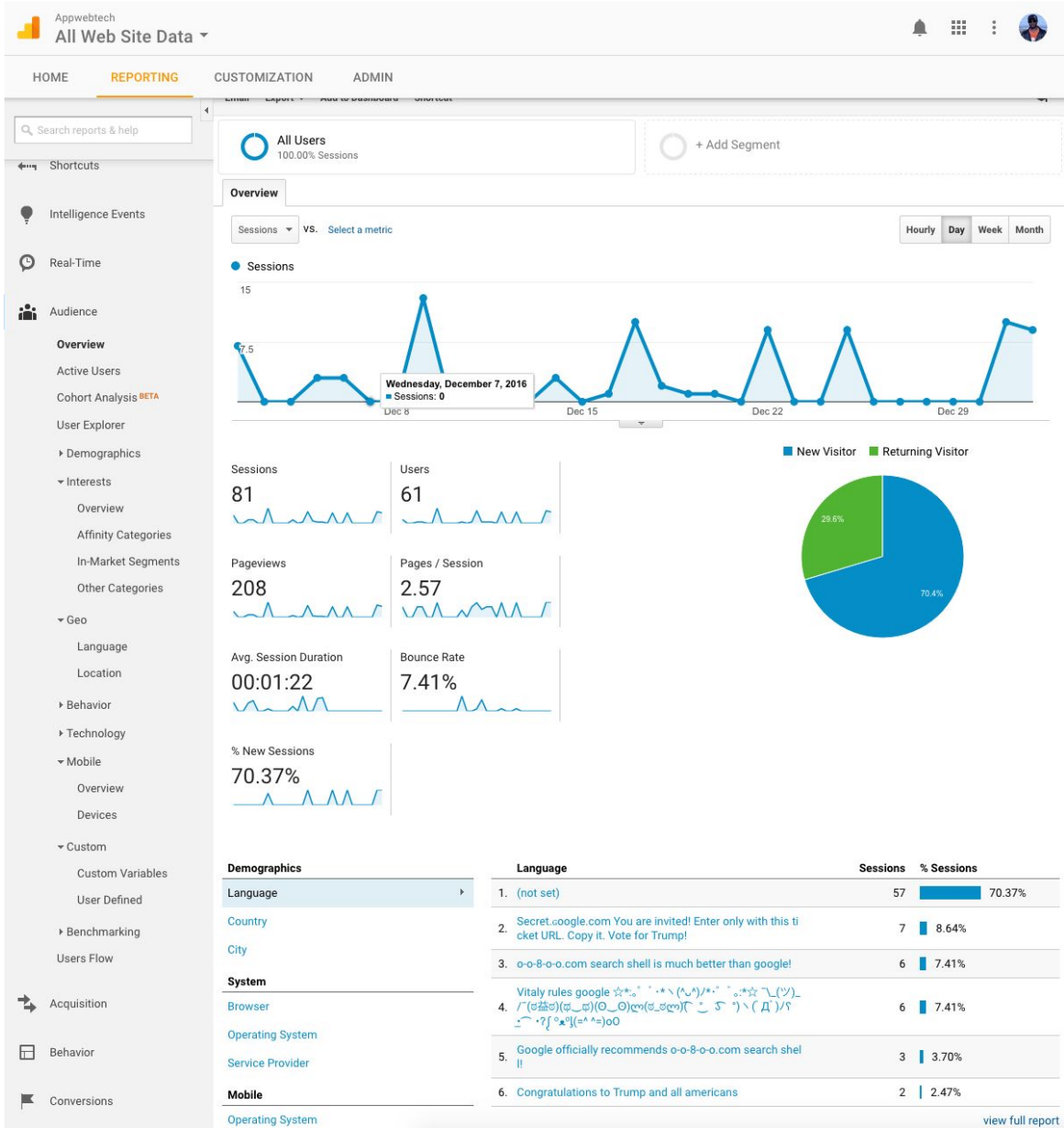
As an example, the appwebtech is a website that has no data on the FrontEnd at this moment but has a fully functional BackEnd system with data within it's servers which can be accessed by whomever has encrypted links to it. Let's take a view of last month's activity .

It's easy to know the demographics of my visitors, even though in my case, I already knew them before hand as I handed them the links to fetch whatever data they wanted. In an online store scenario, where people are buying downloadables like music, audiobooks, e-books etc this information would be vital in knowing who is buying from you and their demographics.

Below is an image with the demographics of my website **visitors.**
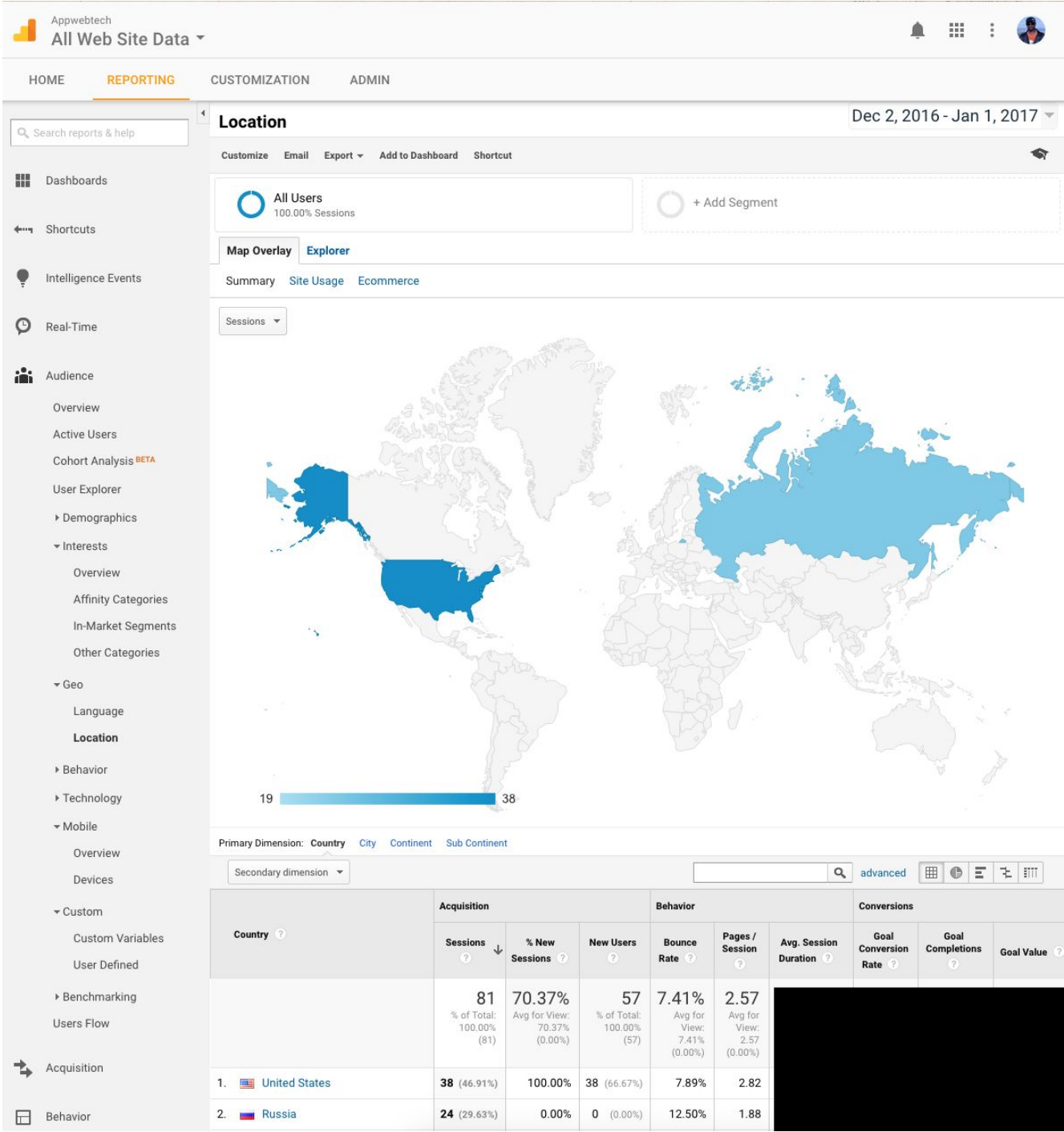
An overview of your audience, their age and type of tech they are using in regard to browsers, OS, service providers together with their platforms like mobile or desktop can help in creating decisions on how to market your products.

Browsers

Platforms (Mobile or Desktop)
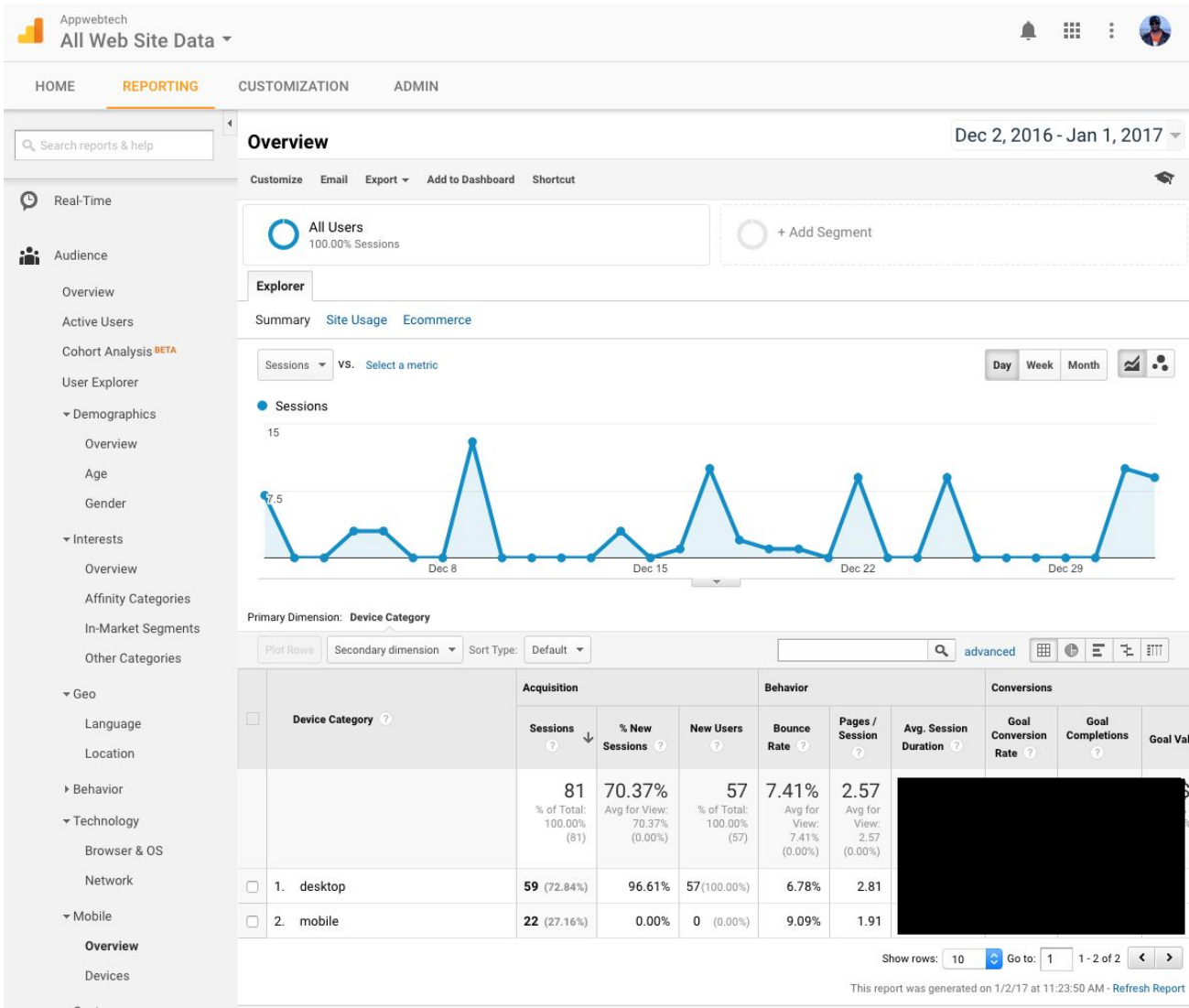
Mobile (Devices)

I can dig deeper to find out how many sessions were logged using an iPhone for instance.

| Mobile Device Info	Acquisition			Behavior			Conversions		
	Sessions ↓	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	22 % of Total: 27.16% (81)	0.00% Avg for View: 70.37% (-100.00%)	0 % of Total: 0.00% (57)	9.09% Avg for View: 7.41% (22.73%)	1.91 Avg for View: 2.57 (-25.66%)				
1. Apple iPhone	22 (100.00%)	0.00%	0 (0.00%)	9.09%	1.91				

Cohort Analysis

Mobile Device Info	Acquisition			Behavior			Conversions		
	Sessions ↓	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	22 % of Total: 27.16% (81)	0.00% Avg for View: 70.37% (-100.00%)	0 % of Total: 0.00% (57)	9.09% Avg for View: 7.41% (22.73%)	1.91 Avg for View: 2.57 (-25.66%)				

In BETA now is a Cohort Analysis that creates acquisition data cohorts by User Interaction both in data percentages and graphs.
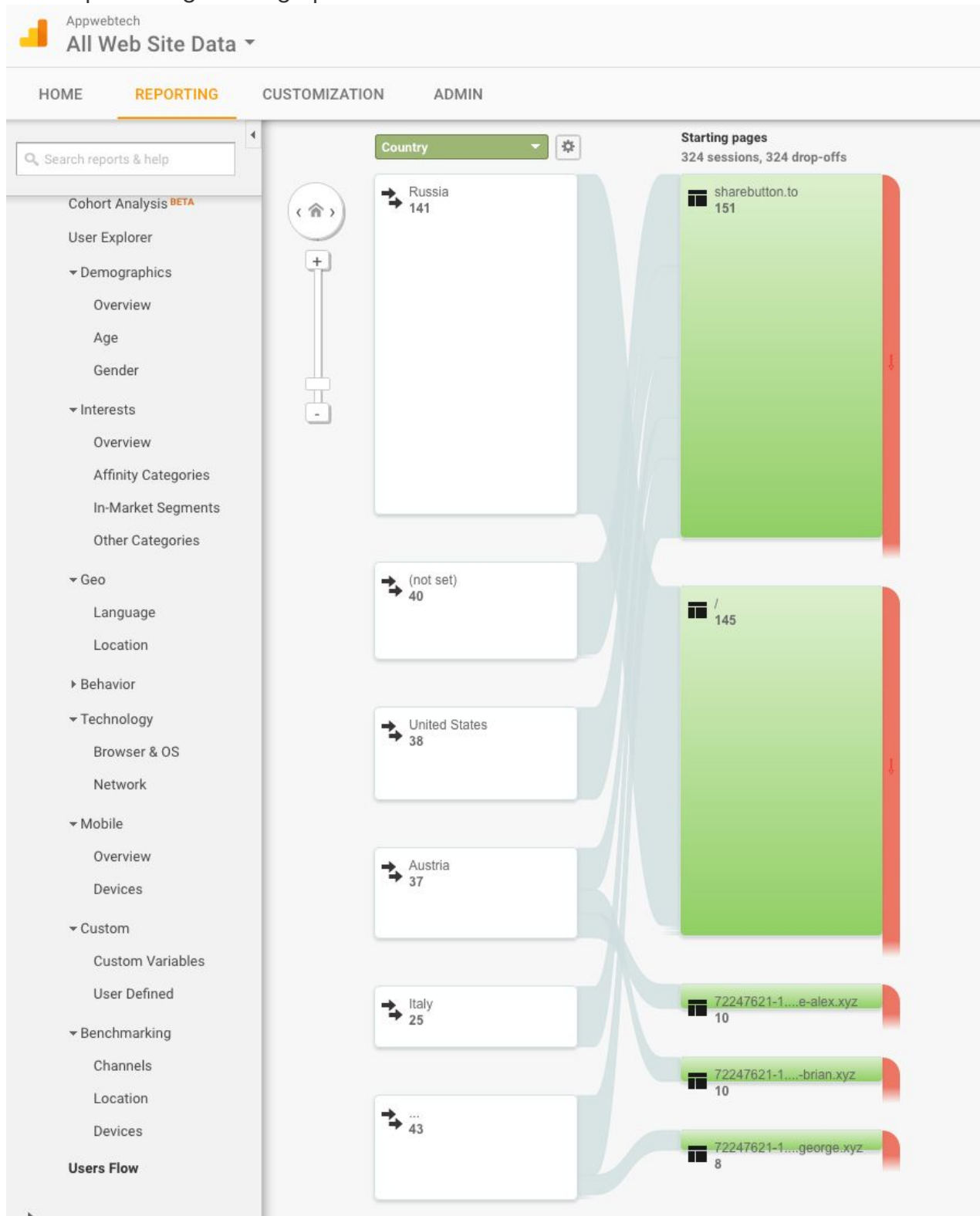
There are many ways that Google Analytics can create a competitive advantage to your business but the most important aspect in the design process is a website which is **SEO ready**.

Photoshop

I used photoshop for image sizing and for enhancing sharp display accross platforms. I tweaked images to ensure that pixels are not lost when switching viewports and that the image extensions like *.jpeg* and *.png* were well saved using a professional application like photoshop to curb image degradation.

PHP

I used PHP for the BackEnd submission of the contact form. PHP is a server side programming language and more about it can be read here. The form submission is deactivated because I don't want people to spew e-mails on my account.Below is the form submission in PHP.

```php
<?php
//get the form fields, removes html tags and whitespace.
$name = strip_tags(trim($POST["name"]));
$name = str_replace(array("\r","\n"),array(" "," "),$name);
$email = filter_var(trim($_POST["email"]), FILTER_SANITIZE_EMAIL);
$message = trim($_POST["message"]);
//check the data.
if(empty($name) OR empty($message) OR !filter_var($email,
    FILTER_VALIDATE_EMAIL)) {
    header("Location: http://www.theappwebtech.com/projects/2016018/index
        php?success=-1#form");
    exit;
}
//set the recipient email address. Update this to YOUR desired email addr
$recipient = "josembi.gmail.com";
//set the email subject.
$subject = "New contact from $name";

//build the email content.
$email_content = "Name: $name\n";
$email_content .= "Email: $email\n\n";
$email_content .= "Message:\n$message\n";

//build the email headers.
$email_headers = "From: $name <$email>";

//send the email.
mail($recipient, $subject, $email_content, $email_headers)

// redirect to the index.html page with success code
header("Location: http://www.theappwebtech.com/projects/2016018/index.
    php?success=1#form");

    ?>
```

Deployment instructions

This website can be viewed here and can be deployed to any webserver via FTP. Been a single page Fluid Design, with no database in the BackEnd, it's maintenance costs are close to zero and it's relevance is purely for marketing purposes.

I've used GitHub **gh-pages** to host the website because it's a simple single webpage without a database to interact with.

Developer

Joseph M Mwania

Contacts

http://www.theappwebtech.com/

https://github.com/appwebtech

https://twitter.com/appwebtech

https://www.facebook.com/theappwebtech/

https://it.pinterest.com/appwebtech/

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