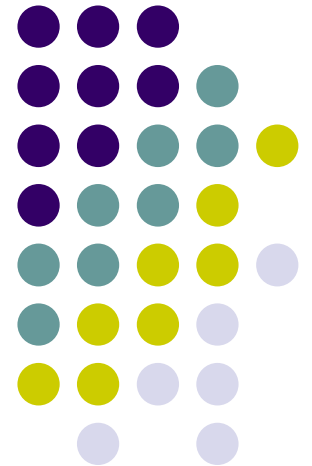
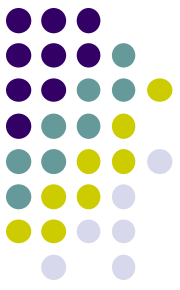


# Google Analytics

---





# Background

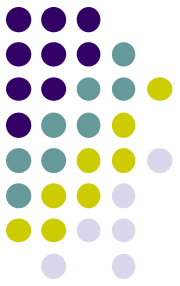
- Google Analytics provides an SDK that allows gathering usage data from [iOS](#) and [Android](#) Apps, known as Google Analytics for Mobile Apps
- Google launched the service in November 2005 after acquiring [Urchin](#)
- In October 2012 another new version of Google Analytics was announced, called 'Universal Analytics'. It supports cross-platform tracking, flexible tracking code to collect data from any device, and the introduction of custom dimensions and custom metrics.

# Background



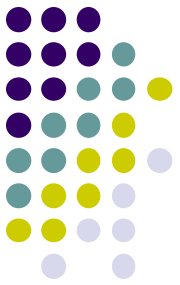
- In March 2016, Google released Google Analytics 360, which is a **software suite** that provides analytics on **return on investment** and other marketing indicators.
- In October 2017 the newest version of Google Analytics was announced, called Global Site Tag. Its purpose was to unify the tagging system to simplify implementation.
- In June 2018, Google introduced Google Marketing Platform, an **online advertisement** and **analytics** brand. It consists of two former brands of Google, **DoubleClick Digital Marketing** and Google Analytics 360.

# Problem Google Analytics solved



- Understand the number of users in your app, their characteristics, and where they come from.
- Measure what actions your users are taking.
- Measure in-app payments and revenue.
- Customize reports specific to your business.
- Visualize user navigation paths.
- Slice and dice your data to understand different user groups' behavior

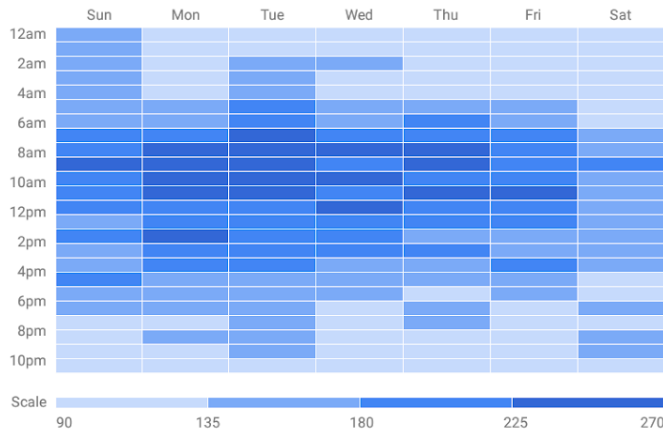
# When to use Google Analytics?



Overview

Apr 6 - Apr 12

## Users by time of day



## Total events by event categories

Event category	Total events
Total	77,419
Enhanced Ecommerce	76,080
Exited	1,325
Contact Us	14

## Devices

7.05% of total visits

Explorer Map Overlay

Site Usage Goal Set 1 Ecommerce AdSense

Visits 1,396 % of Total: 7.05% (19,809)	Pages/Visit 1.14 Site Avg: 1.47 (-22.18%)	Avg. Time on Site 00:00:24 Site Avg: 00:01:33 (-74.67%)	% New Visits 84.46% Site Avg: 72.87% (15.91%)	Bounce Rate 90.62% Site Avg: 77.89% (16.33%)
---	---	---	---	--

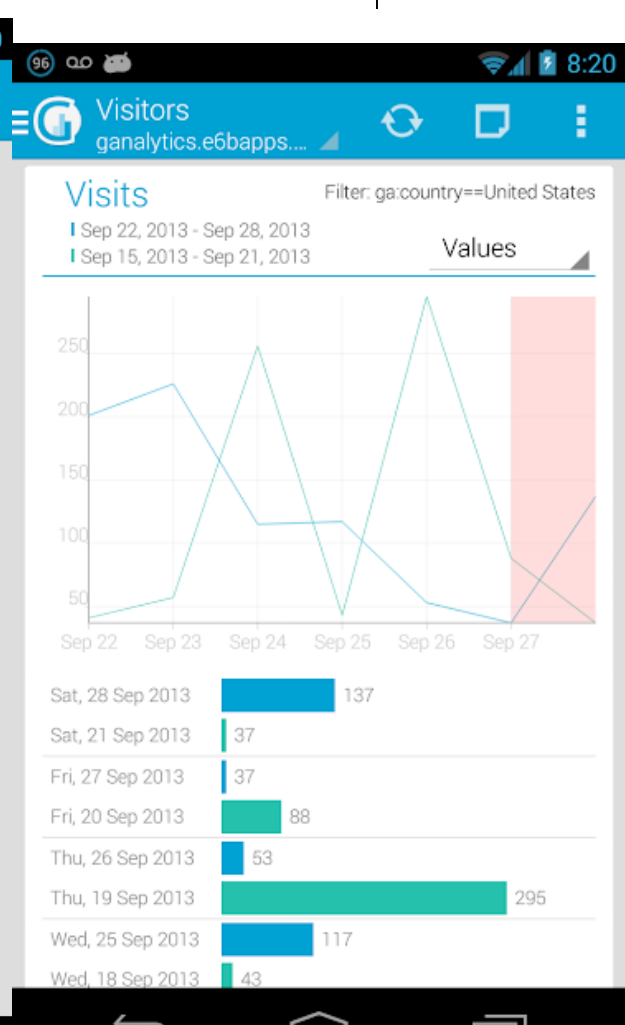
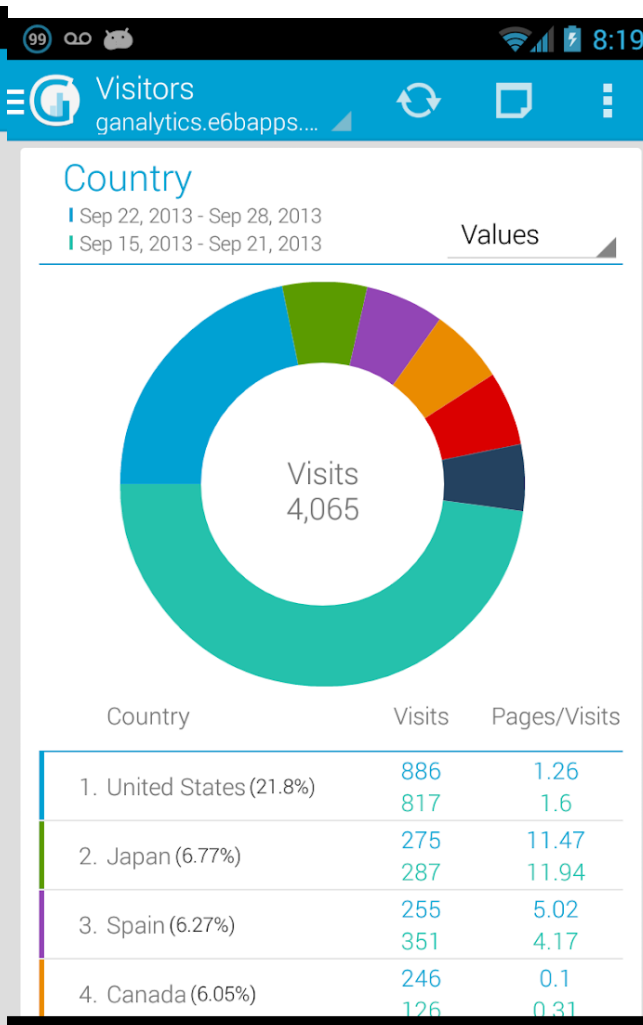
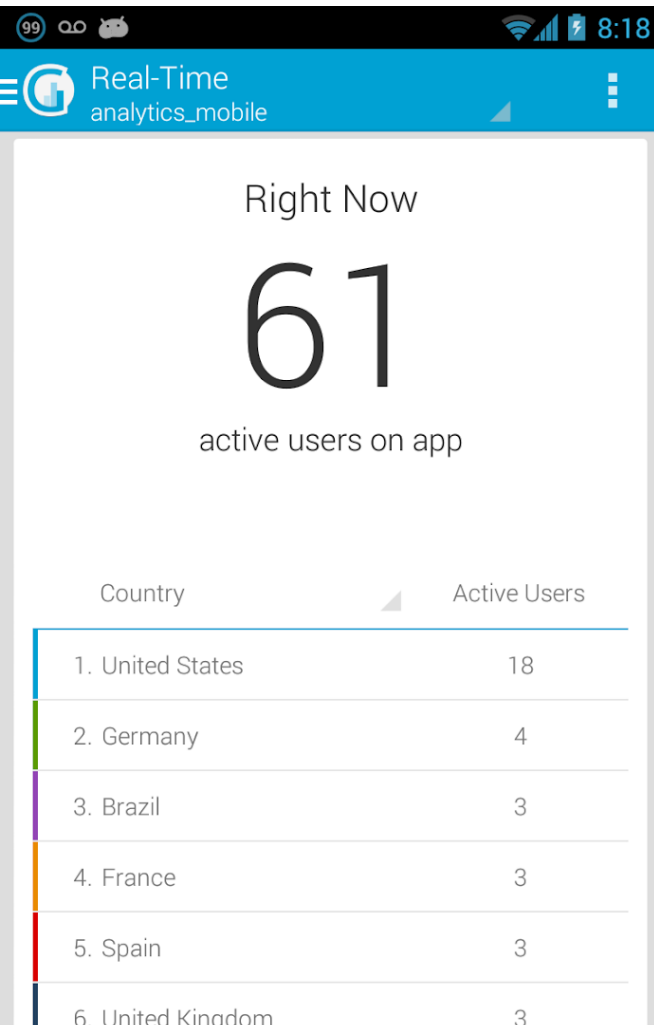
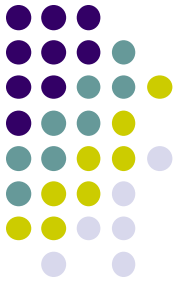


Viewing: Mobile Device Info Mobile Device Branding Service Provider Mobile Input Selector Operating System Other

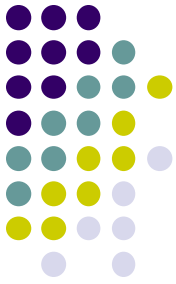
Mobile Device Info	Visits	Pages/Visit	Avg. Time on Site	% New Visits	Bounce Rate
1. Apple iPhone	555	1.12	00:00:22	86.67%	92.25%
2. Apple iPad	322	1.20	00:00:26	87.69%	87.27%
3. (not set)	87	1.28	00:00:19	83.91%	83.91%
4. Apple iPod Touch	85	1.15	00:00:27	81.18%	88.24%
5. Motorola DroidX	38	1.03	00:00:21	80.53%	97.37%
6. Motorola Droid 2	28	1.14	00:00:11	28.67%	89.29%
7. HTC Desire	18	1.28	00:00:43	83.33%	88.89%
8. HTC EVO 4G	17	1.18	00:00:43	94.12%	94.12%
9. HTC ADR6300 Incredible	17	1.00	00:00:00	82.35%	100.00%
10. HTC Desire HD	14	1.07	00:00:01	85.71%	92.86%

Jul 7, 2011 - Aug 6, 2011

# gAnalytics from e6bapps



# Firebase Plugin

A screenshot of an IDE (likely Android Studio) showing the Firebase plugin interface. The main editor displays the MainActivity.java file with the following code:

```
1 package com.example.nathan.trygoogleanalytics;
2
3 import android.support.v7.app.AppCompatActivity;
4 import android.os.Bundle;
5
6 public class MainActivity extends AppCompatActivity {
7
8     @Override
9     protected void onCreate(Bundle savedInstanceState) {
10         super.onCreate(savedInstanceState);
11         setContentView(R.layout.activity_main);
12     }
13 }
14
```

The right-hand side of the IDE shows the Assistant panel with the Firebase logo and the following text:

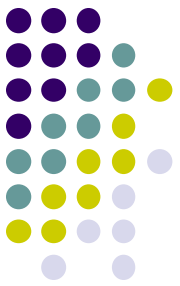
Assistant

**Firebase**

Firebase gives you the tools and infrastructure from Google to help you develop, grow and earn money from your app. [Learn more](#)

- Analytics**  
Measure user activity and engagement with free, easy, and unlimited analytics. [More info](#)
- Cloud Messaging**  
Deliver and receive messages and notifications reliably across cloud and device. [More info](#)
- Authentication**  
Sign in and manage users with ease, accepting emails, Google Sign-In, Facebook and other login providers. [More info](#)
- Realtime Database**  
Store and sync data in realtime across all connected clients. [More info](#)
- Storage**  
Store and retrieve large files like images, audio, and video without writing server-side code. [More info](#)
- Remote Config**  
Customize and experiment with app behavior using cloud-based configuration parameters. [More info](#)

The IDE interface includes a menu bar at the top with options like 'Navigate', 'Code', 'Analyze', 'Refactor', 'Build', 'Run', 'Tools', 'VCS', 'Window', and 'Help'. The status bar at the bottom shows 'Fri 11:18 AM' and various system icons.



# Firebase

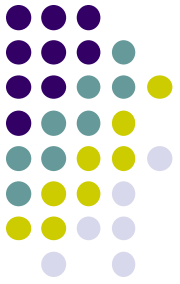
```
// [START shared_app_measurement]
// Obtain the FirebaseAnalytics instance.
mFirebaseAnalytics = FirebaseAnalytics.getInstance(this);
// [END shared_app_measurement]
```

```
// [START user_property]
mFirebaseAnalytics.setUserProperty(s: "favorite_food", mFavoriteFood);
// [END user_property]
```

```
// [START custom_event]
Bundle params = new Bundle();
params.putString("image_name", name);
params.putString("full_text", text);
mFirebaseAnalytics.logEvent(s: "share_image", params);
// [END custom_event]
```



# Demographic



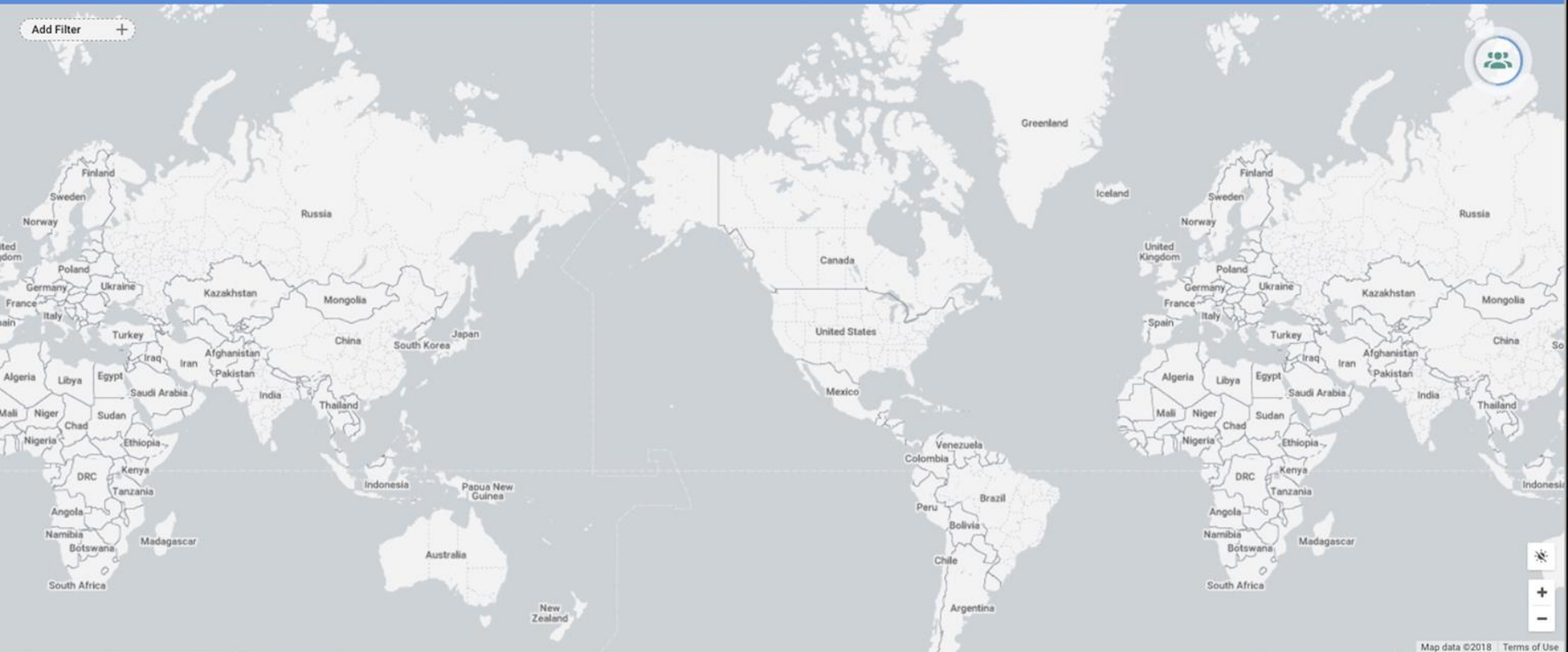
tryGoogleAnalytics

Go to docs

StreamView



Add Filter +



Map data ©2018 Terms of Use

USERS

EVENTS

Streaming in the last 30 mins

Top User Property Value

Top Location

Top App Version

View a random user's event stream

1

OS v...ion = andr...1.0

1

United States

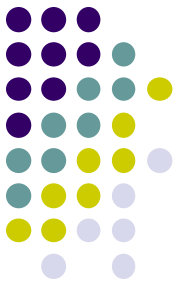
1

1.0

1

USER SNAPSHOT

# Edit Audience (customer category)



Audience name \*

Favorite\_Food\_Hotdog

21 / 80

Audience description

User whose favorite food is hotdog

34 / 100

Include users that meet the following conditions at least once from this point forward

favorite\_food



... exactly matches Hot Dogs



OR

AND

ADD EXCLUDE GROUP

Membership duration

30

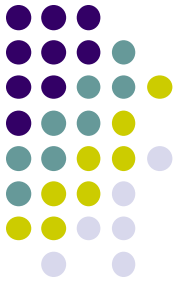
days

Set to maximum limit

CANCEL

CREATE

# Events Log



Today

Compare

EVENTS

PARAMETER REPORTING

Search...

DOWNLOAD CSV

Event name ↑	Count	↔	Users	↔	Mark as conversion ?
first_open	1	-	1	-	<input checked="" type="checkbox"/>
screen_view	2	-	1	-	<input type="checkbox"/>
select_content	1	-	1	-	<input type="checkbox"/>
session_start	1	-	1	-	<input type="checkbox"/>



Send your raw events to BigQuery. [LEARN MORE](#)

[LINK TO BIGQUERY](#)

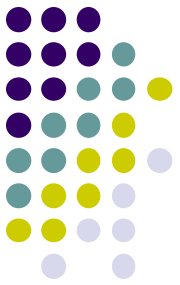


# Fabric Plugin

The screenshot shows an IDE window with the following components:

- Manifest File:** `android:manifestFile="@mipmap/ic_launcher"`, `android:label="@string/app_name"`, `android:roundIcon="@mipmap/ic_launcher_round"`, `android:supportsRtl="true"`, `android:theme="@style/AppTheme"`, `<meta-data android:name="firebase_crashlytics_collection_enabled" android:value="false" />`, `<meta-data android:name="io.fabric.ApiKey" android:value="f14cb30a980d9a8e07328719950d66e13fe1" />`, `<activity android:name=".MainActivity">` with intent filter and category, and `<uses-permission android:name="android.permission.INTERNET" />`.
- IDE Interface:** Tabs for `Fragment.java`, `dimen.xml`, `MainActivity.java`, and `ImageInfo.java`. A breadcrumb shows `manifest > application > meta-data`. The bottom bar includes `Text`, `Merged Manifest`, and `Event Log`.
- Fabric Login Screen:** Features the Fabric logo, the text "fabric" and "The tools you need to build the best apps.", an email input field containing `ashang83@gmail.com`, a password input field with six dots, and buttons for `+ Sign Up` and `Forgot Password?`.

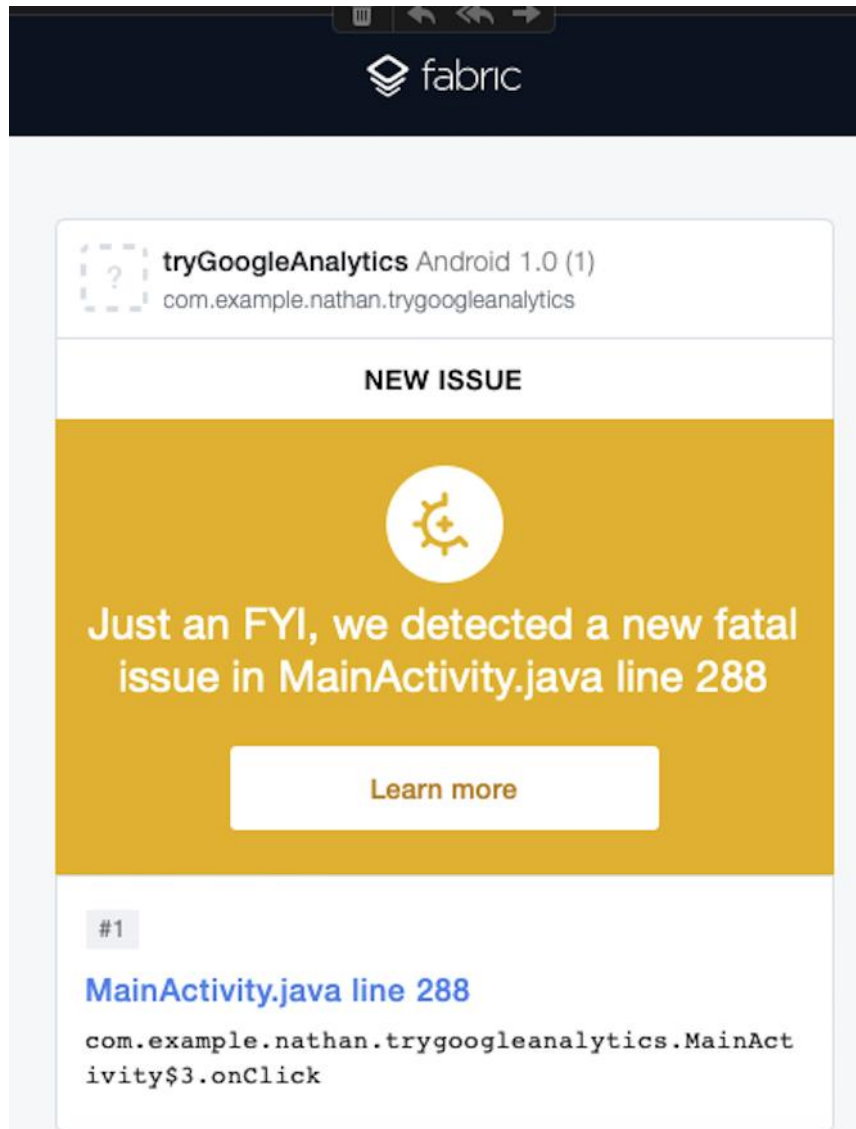
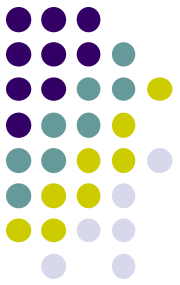
# Crashlytics



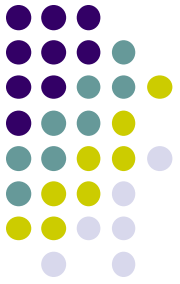
```
<meta-data
  android:name="firebase_crashlytics_collection_enabled"
  android:value="false" />
<meta-data
  android:name="io.fabric.ApiKey"
  android:value="f14cb30a980d9a8e07328719950d66e13fe16064"
/>
```

```
public void onClick(View view) {
    throw new RuntimeException("This is a crash");
    Crashlytics.getInstance().crash(); // Force a crash
}
});|
```

# Receive Notification Email

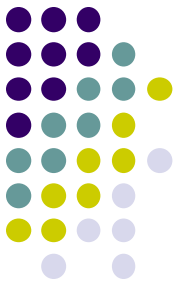


# Crash Log in Dashboard



1 CRASH		1 AFFECTED USER		NOV 07			NOV 09			NOV 11			[Redacted]		
FILTER 1 ISSUE BY		Status		Device & OS			Crash Insights			Q Keys, notes, users...					
<input checked="" type="radio"/> Open		<input type="radio"/> Closed		<input type="radio"/> All											
<input type="checkbox"/>		MainActivity.java line 288				#1 com.example.nathan.trygoogleanalytics.MainActivity\$3.onClick			1.0 (1)			1 CRASH		1 USER	

# Reference



- Google Firebase: <https://console.firebase.google.com/>
- Fabric: <https://get.fabric.io/>
- React Native: <https://facebook.github.io/react-native/docs/tutorial.html>
- React: <https://reactjs.org/tutorial/tutorial.html>
- History of React Native: <https://medium.com/react-native-development/a-brief-history-of-react-native-aae11f4ca39>
- Airbnb Drop React Native:
- <https://medium.com/airbnb-engineering/sunsetting-react-native-1868ba28e30a>
- Google Analytics:  
<https://developers.google.com/analytics/solutions/mobile>
- Wiki on Google Analytics:  
[https://en.wikipedia.org/wiki/Google\\_Analytics](https://en.wikipedia.org/wiki/Google_Analytics)