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FOSSASIA - OPEN EVENT

**Google Summer of Code 2016**

# About Me

I currently in the 4th year of my Bachelors in Technology Degree from Delhi Technological University (formerly DCE) in Electronics and Electrical Engineering. I have been tinkering with code since school days. I love working on Android Apps, as well as the Android OS (AOSP), and have spent many of my nights up hacking on electronics projects. I also regularly participate in a lot of hackathons and have won a few of them in the Delhi circuit. As an open source Android evangelist, I have spoken at MODS 2014, and at DroidCon India 2013, 2014 and 2015, on topics such as - “Modifying and Enhancing the Android OS” and “Continuous Integration of Android OS Projects”.

I was a participant at Google Summer of Code 2015 under the organisation FOSSASIA, working on the Open Event Webapp project.

# Overview

I wish to contribute to the development of Open Event’s client side web and android apps. I was part of GSoC last year as well, and had worked on the webapp. I want to take that work forward, and also contribute to the Android app.

There are a number existing problems to be resolved, as well as multiple planned features that I plan to work on.

# Work Experience

* Open Source Contributions to -
  + [Android Open Source Project](https://android-review.googlesource.com/#/q/owner:championswimmer)
  + [CyanogenMod](http://review.cyanogenmod.org/#/q/owner:championswimmer)
  + [Arduino IDE](https://github.com/arduino/Arduino/commits/master?author=championswimmer)
  + [AOKP](http://gerrit.aokp.co/#/q/owner:championswimmer)
  + [FOSSASIA - Open Event Webapp](https://github.com/fossasia/open-event-webapp/commits?author=championswimmer)
* Android Apps built -
  + [Recovery Manager for Xperia](https://play.google.com/store/apps/details?id=in.championswimmer.twrpxperia)
  + [SubtleNews](https://play.google.com/store/apps/details?id=in.ac.dtu.subtlenews.free)
  + [Trickle - Open Data Visualiser](https://play.google.com/store/apps/details?id=in.tosc.trickle)
* Open Source Android Libraries built -
  + [SimpleFingerGestures](https://github.com/championswimmer/SimpleFingerGestures_Android_Library) - used by over 40 apps on Play Store
  + [Android Social Buttons](https://github.com/championswimmer/Android-SocialButtons) - used by over 20 apps
  + [LifeLog Library](https://github.com/championswimmer/Lifelog-Android-Library)

# Goals

1. **Android: Auto-generation of APK:** We have already achieved a level where, only changing certain config parameters, without touching Java code, we can make different apps for different events. We can take this further, and be able to automatically generate the APK without the user having to compile anything.
2. **Android: Improve themeability support :** Add more areas which can be themed. Have dark and light modes.
3. **Android: Improve testing, building support :** This helps in achieving goal (1), and also better collaboration. I have already worked a bit on this, but we need much more code coverage, and better automated code review processes.
4. **Webapp: Port to a more responsive and faster framework** We need to move to Angular2 or React or Ember. The current framework has got performance bottlenecks.
5. **Webapp: Better search functionality** We need to provide searching functionality for session descriptions, content etc. Currently all search functionality is title based.
6. **Webapp: Better theme support** We need to allow event organisers theme the webapp even more. Right now only top bar colors are available. Sample CSS/SCSS needs to be built to allow theming.
7. **Support for rating sessions: Votes before event, and reviews after event.** This should help in -
   1. Deciding which sessions to confirm, by votes before the event.
   2. Gathering feedback after the session

# Specifications

The current state of the Open Event client side apps is in a functional state, but there are both, a large number of issues remaining, and an equally large number of required features to be implemented.

In the current state, the system still cannot be used by totally non-technical organiser (who have no coding knowledge). One of the primary goals, I believe, should be during GSOC 2016 would be to generate more documentation (guides, videos), make apk/site generation more automated, and employ convention-over-configuration methods, so that very little data (other than details of Event, Speakers and Sessions needs to be configured.)

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# Availability

I would be able to devote **approx 50 hours** every week to GSOC. During 15th to 25th May I will have my end-sessional examinations, and time devoted would be around 1 hour per day for that time.

I have no obligations after May, and would be devoting all my time to GSOC.

I have been part of developer groups and open source meetups in Delhi, so I would be able to organise FOSSASIA/Open Source events to promote FOSSASIA and it’s initiatives, as I have already done during GSOC 2015.

I will be reporting my work over daily scrum mails on the mailing list. I accept that I was not regular enough last year, and ***I would strive to be regular, and sincere with my scrum and daily updates.***

# Milestones

## Bonding Time

Fix existing bugs, help merging pending PRs, and close issues and create milestones on Github projects.

Discuss with mentors and org admins about roadmap, and finalise the plan of action.

## Week 1 - 2

I would use this period to improve automation and tooling - which includes

1. Automated scripts to generate apk
2. Automated deployment of webapp (using Bitbaloon or Github Pages)
3. Improve test coverage on both android and web apps
4. Document the auto generation process using guides and videos.

## Week 3 - 4

Improve themeability support on Android App.

Improve UI on the Android App, adhere strictly to Material Design guidelines.

Remove UI glitches like white text on white page, black line under status bar etc.

## Week 5 - 7

These three weeks will be used on a larger set of work - that is to port the webapp to a better, modern, responsive and fast framework. We can weigh the following options -

1. Look at options to improve usage of Angular1 (least preferable)
2. Port to Angular2, moving via ng-forward, or directly.
3. Make a pro-con analysis with Ember and React and take a decision

The idea is to achieve feature parity of existing webapp, with the new framework.

## Week 8 - 9

After having ported to a better framework, we need to work on adding some of the features that are not possible currently - like better search support.

Searches should work on content and title both. Also better support for social sharing, linking to sessions and speakers, and static link support will be added.

## Week 10

Work on extending theming support of the webapp. Theming should mean not just the colors, but also allowing organisers the option to chose from different layouts. We can create default CSS guidelines to be used for custom themes, so that open-event supports 3rd party themes too.

## Week 11 - 12

In the last 2 weeks I want to work on the more ambitions ideas, that will continue even after GSOC. These include -

The Android wear support module for the Android app.

Adding support for Chrome progressive webapp, and Firefox webapp, and Apple Touch icon support to the webapp.

Look at options for adding push notifications and user voting support in the apps.

# Why me ?

Other than being an Android developer for over 4 years, and a passionate open source contributor, I believe that I am well suited for this project, because I have already worked last year with this same project, and I already know very well about the project vision and roadmap.

Also, previously with a collegemate, I had developed a web-based app generator for college level fests and other events - [preview of which you can see here](http://teamosc.github.io/EventFul_Amoeba_AppDesigner/)

I have also worked on a personal project called [Eventful Android Library](https://github.com/teamOSC/EventFul_Android_v2) which intended to make developing apps for events very easy. It is a convention-over-configuration library that can work as a complete app, with as less as [0 lines of a Java file](https://github.com/teamOSC/EventFul_Android_v2/blob/master/app/src/main/java/in/tosc/eventful2/MainActivity.java), and only a [config.json file](https://github.com/teamOSC/EventFul_Android_v2/blob/master/app/src/main/assets/config.json). The idea was to be able to also configure the UX (sliding vs tabs vs navdrawer) on a runtime basis, after reading the config file.

I want to add that, I realise during the second half of of GSOC 2015, my consistency of updates had been low, and I could not pass the GSOC final evaluation. I had been extremely disappointed and depressed with the outcome. I wanted to pass, and also wanted to be able to come to FOSSASIA 2016 conference and present my work. I want to make amends for that, and make sure that I contribute more than anyone else to open-event during GSOC 2016, and be able to complete the project. I have this personal goal in mind to not disappoint Mario, Duke, Hong and Mohit and other mentors once again, make them feel proud in my work, and hence if selected this year, I will put in double the effort to not only make my best effort for GSOC 2016, but make up for my GSOC 2015 shortcomings too.