

Project Proposal
Google Summer of Code 2020

FOSSology

Idea : FOSSology Server Job Dashboard

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Resume: [\[Link\]](#)

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Introduction

Personal Information

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Why GSoC with FOSSology?

I have always been interested in working with new technologies and developing applications for various platforms. FOSSology is the premier free software system for licence scanning and many companies rely on FOSSology on a weekly basis for their work. Improving FOSSology will help the community and these companies in getting their work done easily. This project is about creating an FOSSology server job dashboard and I believe I am the perfect match for working on this project.

Synopsis

FOSSology is an open source license compliance software system and toolkit. As a toolkit you can run license, copyright and export control scans from the command line. As a system, a database and web ui are provided to give you a compliance workflow. In one click you can generate an SPDX file, or a ReadMe with the copyrights notices from your software. Many companies rely on FOSSology on a weekly basis for their work.

Problems Faced

FOSSology has a dashboard, but that is more for the data. In fact, if FOSSology runs as a server for multiple users. There are many jobs around. Depending on the utilisation, there are a number of packages scanned and analysed and therefore plenty of jobs in the queue.

Now comes the problem: FOSSology currently allows us to view our own jobs only or jobs with access rights for the referring upload. While this is consistent in terms of access restrictions, a normal user does not understand what is going on the Fossology server and why their own tasks are taking time to be processed. Impatient

users submit jobs again and again until they see some progress. But in fact they have worsened the Job situation.

The current job dashboard is shown below :

zlib-1.2.11.tar.gz						0:00:00
JobDependency	Status	zlib-1.2.11.tar.gz		Average Items/sec	ETA	
15	Completed	ununpack	299 items/2020-03-21 21:48 - 2020-03-21 21:49	8.5429 items/sec	Scanned	
16 / 15	Started	ad2nest	0 items/2020-03-21 21:49	0.0000 items/sec	0:00:00	[Pause] [Cancel]
17 / 16		copyright	0 items	0.0000 items/sec		[Pause] [Cancel]
18 / 16		ecc	0 items	0.0000 items/sec		[Pause] [Cancel]
19 / 16		keyword	0 items	0.0000 items/sec		[Pause] [Cancel]
20 / 16		mime-type	0 items	0.0000 items/sec		[Pause] [Cancel]
21 / 16		monk	0 items	0.0000 items/sec		[Pause] [Cancel]
22 / 16		nomos	0 items	0.0000 items/sec		[Pause] [Cancel]
23 / 16		top	0 items	0.0000 items/sec		[Pause] [Cancel]
24 / 16		pkcagent	0 items	0.0000 items/sec		[Pause] [Cancel]

Project Goals

Tasks

The following features in addition to the tasks or scan jobs being processed must be added to the dashboard :

- Tasks currently in queue
 - of current user and other users as well.
- Ability to see which tasks are currently being processed by the server.
- Ability to see what other users are doing.
- Better list, sort and filter capabilities than current job view
- Improvement in UI and replacement of flat tables.
 - Enhancement or replacement in the current tabular based job view

Timeline

Duration	Task
March 31	Deadline for submitting Project Proposal
March 31 - May 4	<ul style="list-style-type: none"> • Learn more about Fossology. • Read documentation and learn more about how the server handles jobs. • Read documentation and learn more about the licence compatibility agents work.

May 4 - June 1	<p>Official Community Bonding Period</p> <ul style="list-style-type: none"> ● Get Involved with the FOSSology community. ● Know more about mentors such as their timezone, preferred medium of communication etc. ● Learn about other ongoing projects at FOSSology. ● Get acquainted with various tools used by FOSSology. <p>Begin Task 1 : Viewing tasks currently in queue</p> <ul style="list-style-type: none"> ● Design and plan how the new dashboard will be implemented. ● Get suggestions from mentors. ● Set up the development environment.
June 1 - June 24	<p>Official Coding Period Start</p> <ul style="list-style-type: none"> ● Add functionality to show all tasks currently in queue. ● Test the implemented functionality ● Get reviews and fixing bugs <p>Begin Task 2 : Viewing tasks which are currently being processed.</p> <ul style="list-style-type: none"> ● Add functionality to view tasks which are being processed. ● Test the implemented functionality ● Get reviews and fixing bugs
June 24 - June 29	<ul style="list-style-type: none"> ● Time period for any unexpected delay. <p>Finish Tasks 1 and 2</p>
June 29 - July 3	<p>Phase 1 evaluation</p> <ul style="list-style-type: none"> ● Submit git repository of Code with documentation

July 3 - July 23	<p>Begin Task 3 : Viewing what each user is doing.</p> <ul style="list-style-type: none"> • Add functionality to view what each user is doing. • Test the implemented functionality • Get reviews and fixing bugs <p>Begin Task 4 : Better list, sort and filter capabilities than current job view.</p> <ul style="list-style-type: none"> • Improvements in list, sort and filter capabilities. • Test the implemented functionality • Get reviews and fixing bugs
July 23 - July 27	<ul style="list-style-type: none"> • Time period for any unexpected delay. <p>Finish Tasks 3 and 4</p>
July 27 - July 31	<p>Phase 2 evaluation</p> <ul style="list-style-type: none"> • Submit git repository of Code with documentation
July 31 - August 24	<p>Begin Task 5 : Improvements in UI and replacing flat tables</p> <ul style="list-style-type: none"> • Planning which UI elements will be replaced and designing new UI elements. • Replacing current flat tables and other UI elements with new ones. • Ask feedback from the mentors/users and implement suggestions.
August 24 - August 31	<p>Finish Task 5</p> <p>Final Submission</p> <ul style="list-style-type: none"> • Submit git repository of final code with complete documentation.

Benefits to Community

Implementation of the job dashboard with new features will benefit the community in many ways :

- Users will now have a good understanding of how the tasks are being handled by the FOSSology server.
- They will know whether their or someone else's job is currently being run by the server.
- This will prevent users from getting impatient and submitting their jobs again and again.
- Improvements in UI will help attract more users.

Deliverables

- Added functionality of viewing tasks currently in queue.
- Added functionality of which tasks are being processed by users.
- Added functionality of viewing what other users are doing.
- Better list, sort and filter capabilities than current job view
- Improved UI of the job dashboard.

Future Goals

- Explore the possibility of improving the job dashboard.

About Me

I am Yashwant, a 2nd year Computer Science and Engineering student at Thapar Institute of Engineering and Technology, Patiala. I have experience in multiple programming languages like C/C++, Python, Java, Javascript..

I am proficient in javascript, jQuery, PHP, Node.js, SQL and like developing websites using Node.js, React, MongoDB and Express. I know the basics of data science and have worked with libraries like Scikit-learn, Numpy, Pandas, Seaborn, Matplotlib, Plotly and Cufflinks. I have also explored computer vision and android development.

Experience

- Machine Learning Intern at [OpenGenus](#) (august-november 2019).
- Backend Developer at a startup named [Fiks](#) (november-december 2019).

- Web Developer at a startup called [Analyticware](#) (currently working)

I have also coded on various platforms like hackerrank, codechef, codeforces etc.

Working Environment

- Operating System : Ubuntu 18.04.4 LTS / Windows 10 Dual Boot
- OS Type : 64 bit
- GNOME : 3.28.2
- Processor : Intel® Core™ i7-8550U CPU @ 1.80GHz × 8
- Graphics : Intel® UHD Graphics 620 , Nvidia GEFORCE 940MX
- Ram : 8GB
- Hard Disk : 1TB

Commitments

How much time will you be able to contribute to this project?

I will be working 6-8 hours per day for the entire duration of the project.

Will you treat Google Summer of Code as a full-time employment?

Yes

Do you have any experience using source control e.g. Git?

Yes, I have been using GitHub for a long time now. I use it for both my institute as well as personal projects.

Any previous open-source projects you have contributed to?

This is my first time in GSoC. I have already learned a-lot about the open source culture and how they work in a professional way. I would be very excited to learn more. It would be a great opportunity for me to expand my skills while still contributing to open-source. This can be the starting point for me for seriously getting into and truly appreciating the concept of Open-Source. Most of my projects are on my Git-Hub profile.

Do you plan to have any other commitments during GSoC that may affect your work?

I do not have any commitments that would affect my work in any way. I have not applied for any other internships/ part-time / full-time jobs. I have 24/7 internet connectivity, as

well as access to personal laptop. I have no trips / vacations planned irrespective of GSoC or not.

How do we contact you for questions, comments, suggestions, etc.?

I am perfectly fine with Email, Skype, IRC or any other similar medium of communication. My preferred language for communication is English.

Skype : @yashsn2127

Email : yashsn2127@gmail.com

Do you plan on contributing to our project after GSoC is over?

I would definitely like to continue my contributions even after GSoC.

References

1. [FOSSOLOGY GITHUB](#)
2. [FOSSOLOGY](#)
3. [INSTALL FROM SOURCE](#)
4. [YOUTUBE - Using Fossology](#)
5. [PROPOSAL GUIDELINES](#)