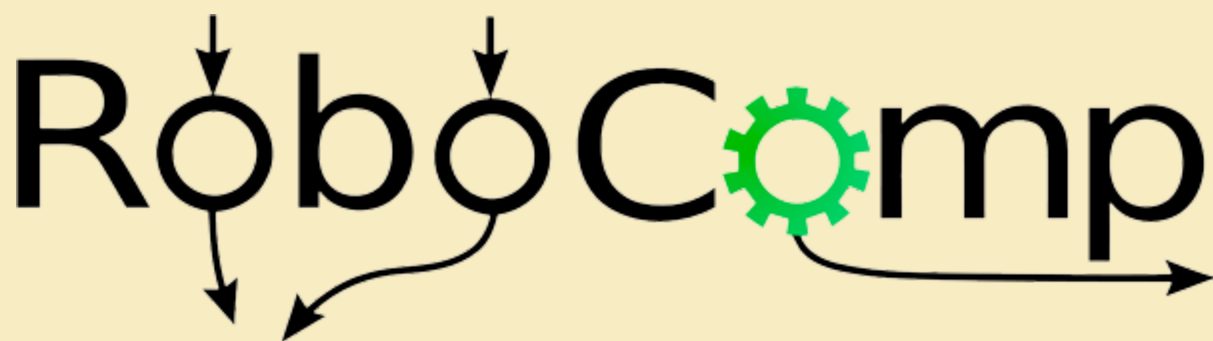# GSOD `19 PROJECT PROPOSAL

Open source organization name: RoboComp

A gentle introduction to RoboComp

BASIC INFORMATION

Name and contact information

- **Name:** Sunny Dhoke
- Email: sunnydhoke22@protonmail.com | sunnydhoke22@gmail.com
- IRC : SUNNY_DHOKE
- Gitter/Slack : sunn-e
- Github: https://www.github.com/sunn-e
- Phone Number: +91 8668 50 41 34
- Country/Region: Nagpur,India

University and Current Enrollment:

- **University:** Indian Institute Of Information Technology, Nagpur
- **Field of Study:** Computer Science and Engineering (Batch of 2020)

My GSoD Assignment Link -

https://github.com/sunn-e/robocomp-robolab/tree/master/components/hokuyoComp

ABOUT ME

I love being simple.

I am a fourth year undergraduate student studying Computer Science and Engineering at Indian Institute Of Information Technology, Nagpur. I came to know about open source software development because of my professors who used open source tools to demonstrate experiments. Since then, I have been contributing to open source communities. This has led me to become part of those organizations. In my free time I read a lot of online material including Hackernews, Reddit and Quora. In fact I have more than 800k+ reads on Quora for my writing. One of my technical answers has gathered more than 40,000+ upvotes. That makes it one of the most upvoted answers of all time on Quora. You may view it here. https://qr.ae/TWtnob

I have been an active part of the OWASP- SecureTea community. I have helped them in creating documentation. I have also released some technical YouTube- How To videos for SecureTea users. You may have look at them by visiting this official OWASP weblink https://www.owasp.org/index.php/OWASP_SecureTea_Project

PRE GSoD INVOLVEMENTS

I came to know about RoboComp via my friend who uses it for his competition winning projects. I looked for it and came across the official gitter channel. I created several issues on GitHub.

Pablo Bustos(@pbustos) helped me a lot on GitHub. Similarly, Luis J. Manso (@ljmanso) helped me clearing my doubts about the project.

PROJECT DETAILS

Introduction:

RoboComp is an open-source Robotics framework providing the tools to create and modify software components that communicate through public interfaces. Components may require, subscribe, implement or publish interfaces in a seamless way.

Building new components is done using two domain specific languages, IDSL and CDSL. With IDSL you define an interface and with CDSL you specify how the component will communicate with the world. With this information, a code generator creates C++ and/or Python sources, based on CMake, that compile and execute flawlessly. When some of these features have to be changed, the component can be easily regenerated and all the user specific code is preserved thanks to a simple inheritance mechanism.

Features:

The first idea offered for the new GSoD program is the integration of many separate pieces of information already existing into a coherent introduction to the framework, A Gentle Introduction to RoboComp, that can guide new users through the initial steps of understanding, installing, coding, deploying and testing with this tool. This manual might include several sections such as:

1. An introduction to component-based programming.
2. Software components in RoboComp.

3. Installation guide of RoboComp.
4. Description of RoboComp's tools and libraries.
5. Quick reference guide of basic components.

My task would be to add the corresponding pages. As per my experience, It may take up to 3-4 days per README page. I will prioritise the main GitHub repo of robocomp for the documentation. My main focus would be on generating pages that were originally created for new students which are trying the software on their own. I do realise that thepages need to be reviewed for both technical and writing accuracy after they've been created. There will be some back and forth reviews with corrections with mentors Luis J. manso and Ramón Cintas.
Suggestions for improvement by the community will be taken into account. The current documentation may need a complete restructuring and I wish mentors will be okay with it.

My main focus would be to complete the readable documentation as soon as possible and start uploading How-To videos about robocomp videos to brand new YouTube and Vimeo channels of RoboComp. This thought came after I could not find a decent tutorial on any of the platform.
I have faced the problem so I know exactly where I should be focusing on.
 I have previously made "functional" videos for The OWASP's SecureTea project. The videos are available on OWASP's official website. You may visit the site by clicking on this link(https://www.owasp.org/index.php/OWASP_SecureTea_Project) or copying it to your choice of browser. You can have a look at them here 1 and 2 too. You can find my name under video creator section.

Mentors:

Luis J. manso, Ramón Cintas

MEASURABLE OUTCOMES

- Creating a main Introduction guide of robocomp in Read the docs style
  - A simple one to get things started right away
    - Readable format
    - YouTube How-To style video
  - A detailed one with lots of explanation on different components
    - Readable document only
- Creating an Installation guide
  - For Students
    - Readable Format
    - YouTube How-To style video
  - For Developers
    - Readable Format
    - YouTube How-To style video
- A technical guide to help describe various software components of RoboComp
  - Readable documentation
- Description of RoboComp's tools and libraries
  - Readable documentation
  - YouTube video describing overall section via PPT.
- Quick reference guides of basic components
  - Readable documentation
- A dedicated YouTube channel for RoboComp. It will have videos of all of the measurable outcomes I have described in a well edited format. The videos will

focus on getting things done ASAP. As per research, an average person's attention span ranges from 5-20 mins.

ACHIEVING PROJECT GOALS

The entire task is a continuous process of creating documentation. I need to take examples from already available documentation as reference. I may take inspiration from other open source projects that I'm part off. The content I generate will be working and will be posted on GitHub repository of RoboComp for commit. The reviewers will be reviewing my content as per discussion during GSoD period.After review and technical accuracies are verified, the documents will be merged.

Similarly, YouTube Videos will be created in a draft manner. The output will be shown to mentors and a community if mentors want to. This will help me in focusing on relevant parts of the video.After the final changes, the video will be finalised by all the stakeholders. The videos will be uploaded to the vimeo and YouTube by either me or robocomp mentors to official channels. Also, The videos will be converted to gif for future web embeddings or as iframes. All the relevant readable documents will be updated with iframes.

TIMELINE

Technical writing projects announced **July 30, 2019 at 18:00 UTC**

Google announces the accepted technical writer projects Community bonding **August 1 - September 1, 2019**

Technical writers get to know mentors, get up to speed with the open source organization, and refine their projects in collaboration with mentors Doc development **September 2, 2019**

Doc development officially begins!

September 2, 2019 - November 22, 2019

Technical writers work on their project with guidance from mentors

Time	Work
August 1 - September 1, 2019	- Community Bonding Period - Get used to FreeBSD development routines - Setup development environment - Start contributing to README markdown files..
September 2- September 30, 2019	- Creating a main Introduction guide of robocomp in Read the docs style - A simple one to get things started right away

	■ Readable format ■ YouTube How-To style video ○ A detailed one with lots of explanation on different components ■ Readable document only

October 1 - October 31, 2019	● Creating an Installation guide
	  ○ For Students
	    ■ Readable Format
	    ■ YouTube How-To style video
	  ○ For Developers
	    ■ Readable Format
	    ■ YouTube How-To style video
	● A technical guide to help describe various software components of RoboComp
	  ○ Readable documentation
	● Description of RoboComp's tools and libraries
	  ○ Readable documentation
	  ○ YouTube video describing overall section via PPT.

November 1 - November 22, 2019	● Quick reference guides of basic components

	○ Readable documentation ● A dedicated YouTube channel for RoboComp. It will have videos of all of the measurable outcomes I have described in a well edited format. The videos will focus on getting things done ASAP. The lengths shall be at max 5-20 minutes i.e. as long as human attention span.

Availability:

I am available for the GSoD period. Next semester will be my break time.

After GSoD

I will love to contribute to the project in various forms. It may happen that I may come across some bugs while doing my GSoD tasks. Being a coder as well, I will definitely fix them and get them patched. This will help me grow as an open source contributor and will help my professional career too.

REFERENCES

- Discussion with mentors on GitHub and Gitter
- https://www.owasp.org/index.php/OWASP_SecureTea_Project (for my previous works)
- https://robocomp.github.io/web/gsod/2019/ideas/
- https://gitter.im/robocomp/GSoD
- https://github.com/robocomp/robocomp
- https://www.nickkolenda.com/font-psychology/ (for my font choices)