Google
Summer of Code

How to get started?

What is open source?

- Computer software where the source code is distributed under an open source license that allows anyone to study, change, improve and distribute the software.
- Promotes collaboration
- Community of dedicated developers

What is GSoC ?

- Google Summer of Code (GSoC) is a global, online program that brings new contributors into open source software organizations

- Contributors work with an open source organization under the guidance of mentors while earning a stipend for successfully completing their project.

- At the end of the program, codes developed by contributors are released to the world.

Goals of the Program

- ✓ Introduce new contributors to open source software development.
- ✓ Help open source projects bring in new, excited developers who stay involved in their communities after the program ends.
- ✓ Give contributors exposure to real-world software development scenarios (testing, version control, software licensing, distributed development, etc.).
- ✓ Create more open source code for all to use.

Eligibility

- Over 18 upon registration for program
- Beginner contributor to open source or a student
- Eligible to work in the country in which you will reside during the coding period
- Not a resident of a US embargoed country
- Not previously accepted into GSoC more than once

Program structure

- Organization
- Organization Administrator
- Project
- Mentor
- Contributor

How does GSoC work?

Open source software projects apply to be mentor organizations

Google chooses the organizations to participate (198 in 2022)

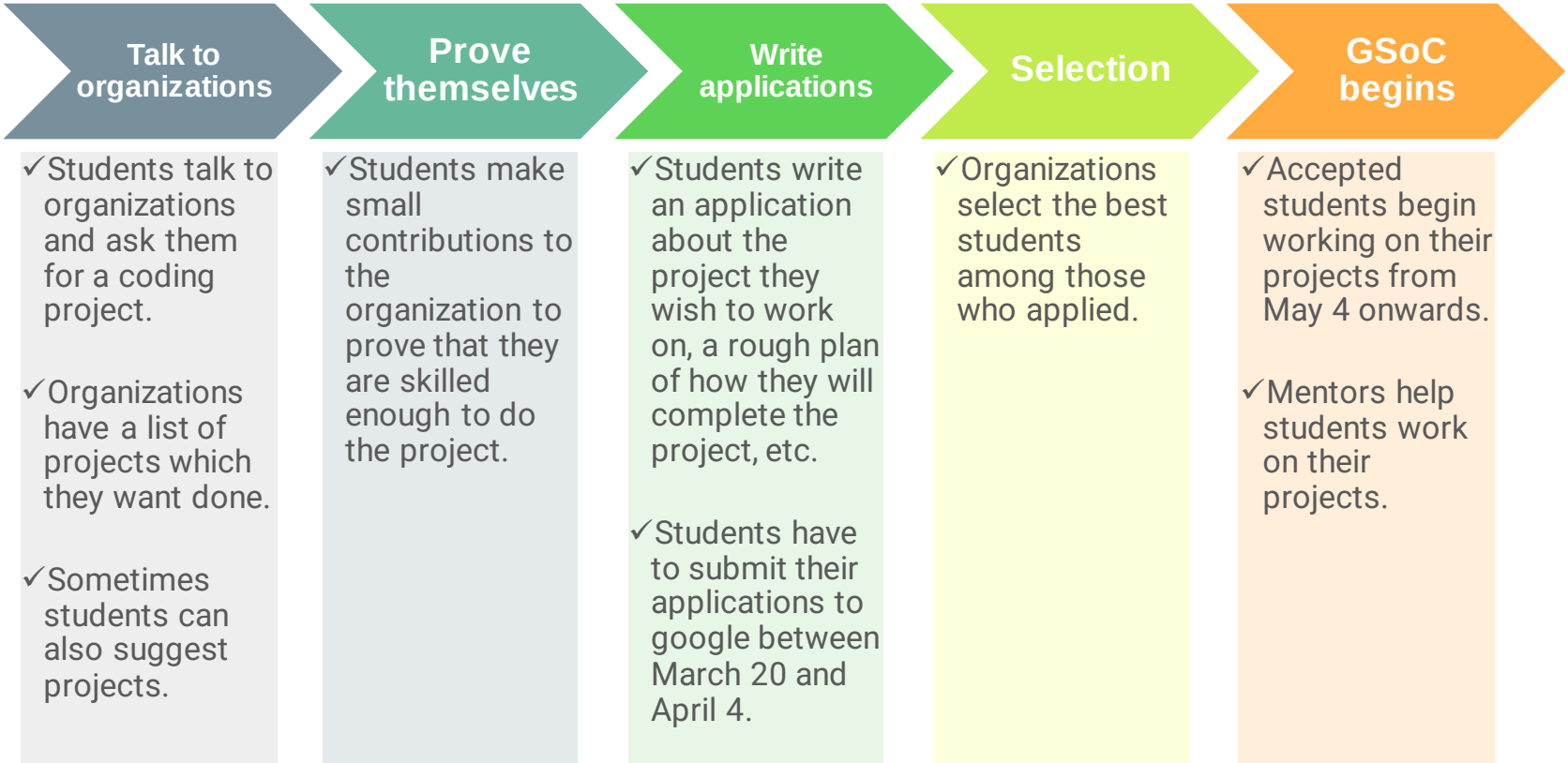
Contributors submit project proposals to mentor organizations

Mentor organizations choose the contributors they'd like to accept

Contributors are paired with a mentor to help them throughout their project

Coding begins! Contributors work on their project under the guidance of their mentor over 12 weeks *(possible extensions available)*

What do students do in GSoC ?



Two types of Projects

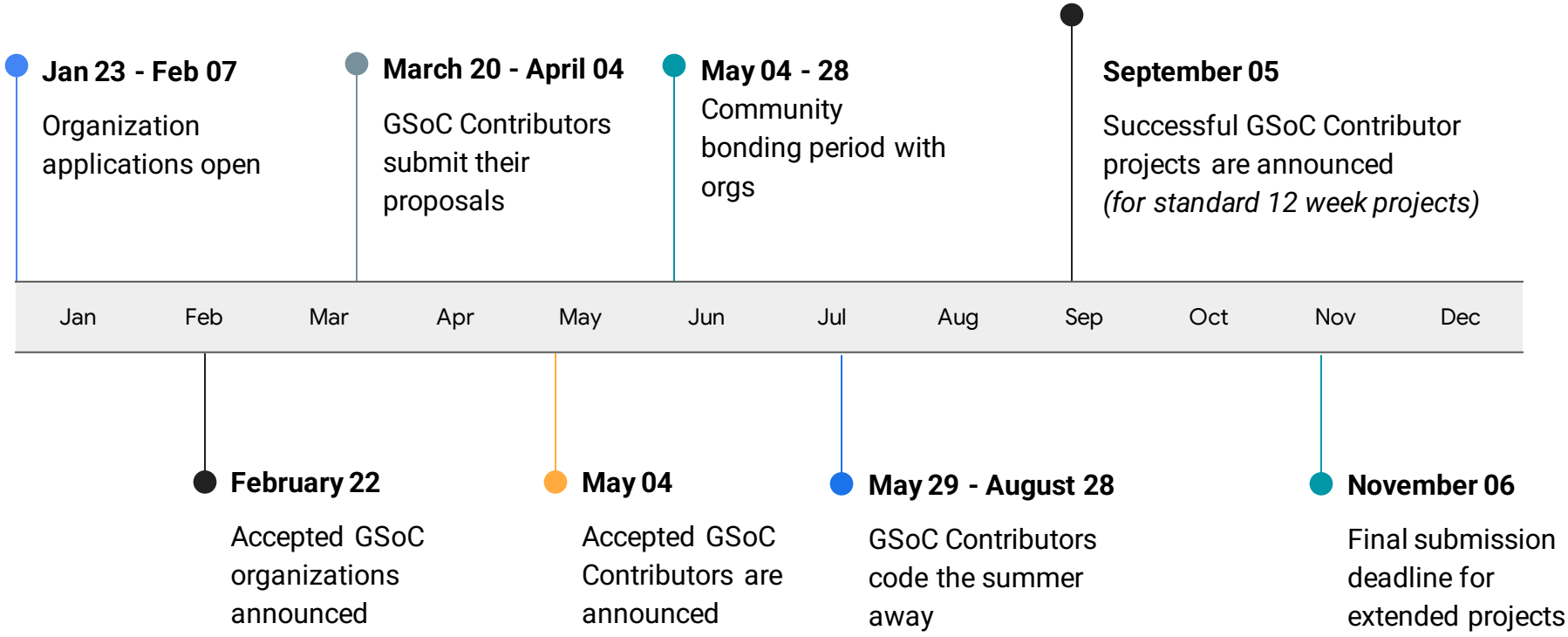
Medium sized	Large sized
• ~175 hrs of work • 1500$ stipend	• ~350 hrs of work • 3000$ stipend

- The standard coding period is 12 weeks for both types of projects. However, contributors can extend their project to a max of 22 weeks with approval from their mentor.

Evaluations

- Contributors must pass two (2) evaluations
- Contributors who pass each evaluation are paid a stipend for their work
- At the conclusion of GSoC, Contributors submit the code they've written for their project for everyone to see and use!

2023 Program Timeline



Why participate in GSoC ?

- Introduces you to collaborative coding
- Portfolio building
- Exposure and networking
- Learn new skills and professional practices
- Your jump-start to the open source world
- Being mentored by highly experienced developers
- Looks Impressive on resume
- Open source contributors are high in demand
- The stipend and the confidence

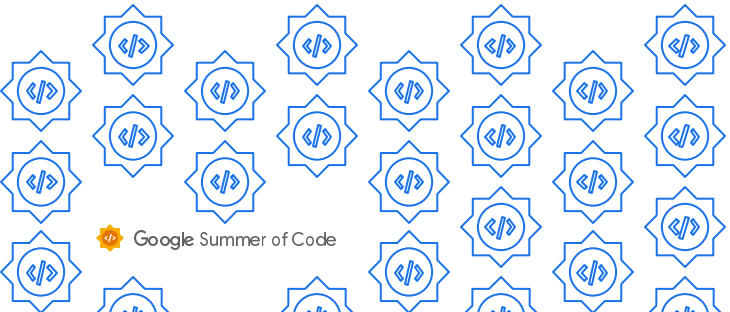
Am I good enough?

Do you have some programming experience ?

Are you comfortable in at least one programming language?

If YES, then you are good enough!

Basic preparation for GSoC



Basics things you must know for GSoC

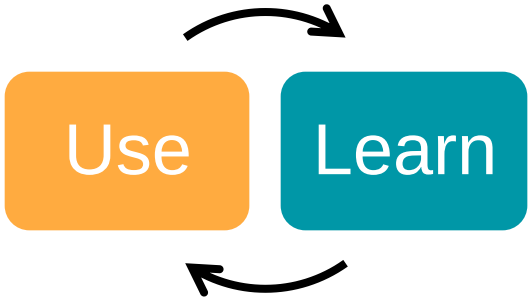
- GitHub
- Good IDEs : VS code, PyCharm etc.
- Good coding practices
- Automated testing
- Virtual machines/WSL (Optional)
- Clear fundamentals – functions, vectorizing, modularizing
- Reading and understanding errors
- Learn Googling
- Practice reading documentations and codes
- Learn to follow installation guides
- Learn to Install and set up packages and software from GitHub
- Professional communication

I am scared of GitHub (what you know cant scare you)

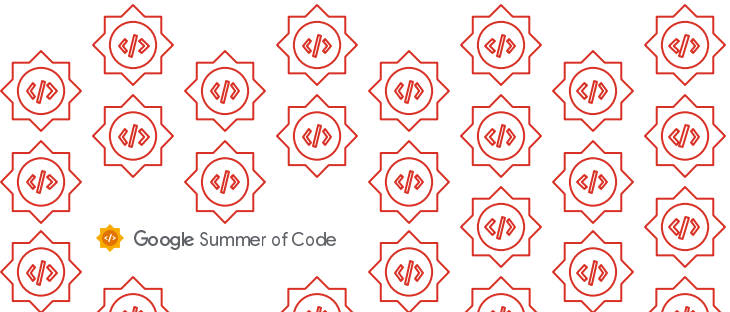
- No need of entire CLI knowledge
- Git GUI Tools like GitHub desktop, SourceTree etc.
- Need to know basics:
  - Remote vs local
  - Push-Pull
  - Working with Repositories – cloning
  - Working with branches
  - Managing forks
  - Creating pull requests
  - Creating Issues and attaching PR to issues
  - Commits, commits message, commit reverting
  - Merge conflicts (Optional)

VS Code looks too complex (VS code is lifesaver)

- Start using Today!
- Setting up with different languages and compilers
- Useful Extensions
- VS Code + GitHub
- VS Code + WSL
- Testing suite
- Different terminals and windows
- Code formatters/Linters
- Reading technical messages
- Debugging (Optional)



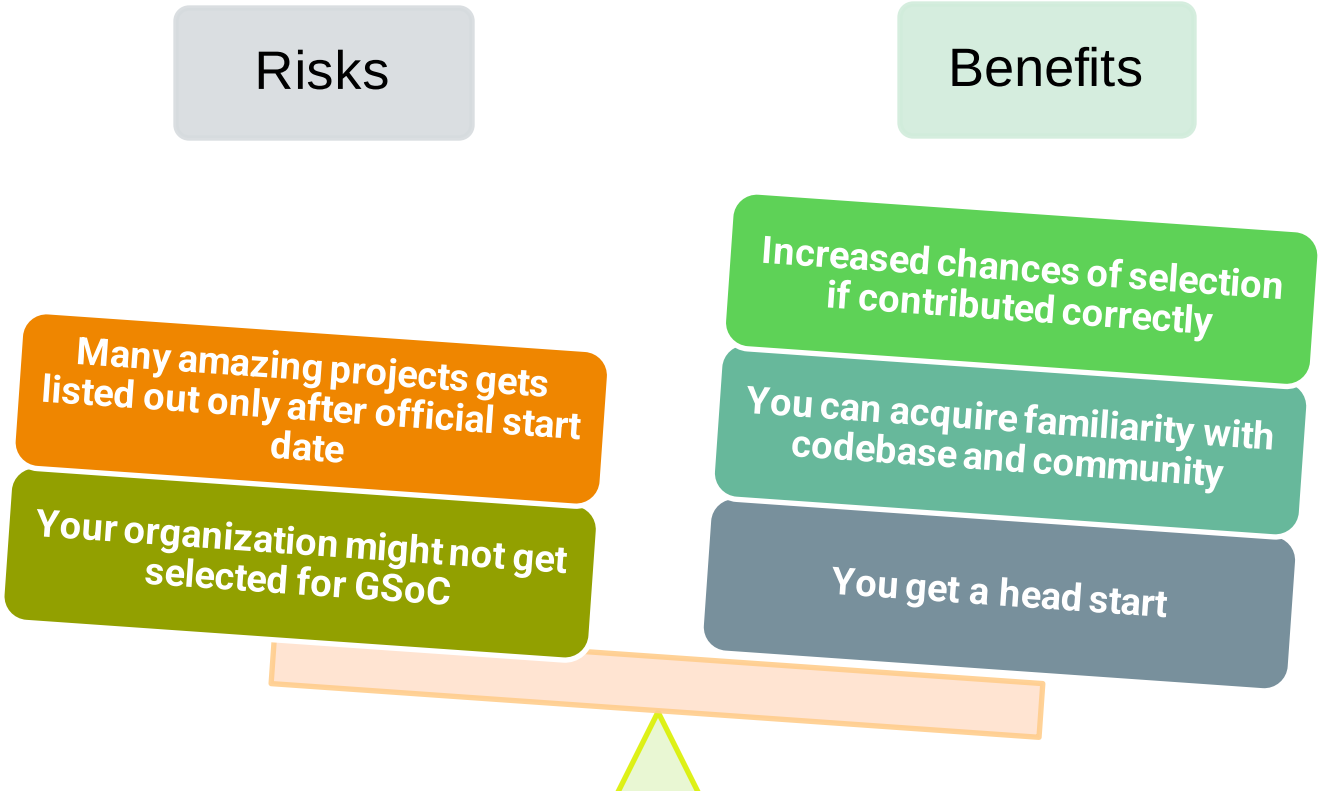
GSoC prep in Dec-Jan



What to do after GSoC'23 is announced?

- Narrow down your interests
- Select one or two programming languages
- Browse organizations from past GSoC
- Narrow down interesting organizations
- Join communication channels of organizations
- Observe, learn, introduce
- Ask proper questions
- Read and follow GSoC guidelines
- Start contributing if confident

Starting contributions in early days



Organization selection

Your interest and familiarity with the software

- Working on a scuba-diver monitoring program can be difficult if you don't know much about scuba-diving.
- Working on a software library can be difficult if you have never used that library.

Skills

- You'll generally need to know the required technologies, especially if it's a popular technology

Competition

- Very popular organizations (like Mozilla) have a lot of competition with extremely skilled students
- New organizations have less competition but accept less students.

Responsiveness

- Some organizations are very responsive. You'll find their forums full of activity.
- Some organizations are very beginner-friendly.
- Organizations which don't seem interested in mentoring should be avoided.

Keeping in touch with multiple organizations

- Contacting multiple organizations protects against unresponsive organizations and too much competitions
- An organization you contact early might not get accepted for GSoC.
- Most people try 1, 2 or 3 organizations.

Lower your risks!

- Narrow down organizations which are repeatedly selected in GSoC
  (https://www.gsocorganizations.dev/)
- Also look for org. which are well-known and encourage early GSoC contributions
  (https://www.jenkins.io/projects/gsoc/2023/project-ideas/)
- Organizations having extremely active community is a good sign
- Narrow down between 2 to 4 organizations to lower the risk
- Always try to find out about any particular selection process beforehand
  (https://hepsoftwarefoundation.org/activities/gsoc.html)

Project selection

- Narrow down 3 to 6 projects, some might be in same organization
- Your interests and skills
- Your experience (for complex or large projects)
- Competition for particular project
- Number of projects given to org. in past GSoC
  (https://www.gsocorganizations.dev/)
- Selection process (Especially when it’s too lengthy)
- Particular requirements for project
- Importance of the project for organization
- How the project fits in the larger picture

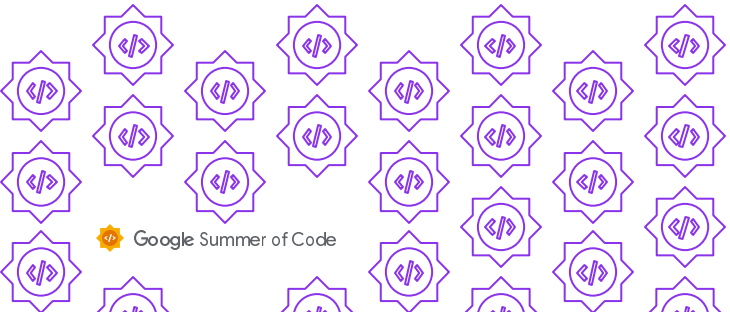
Let’s start contributing!

- GSoC page of particular organization >>> Every other info on how to start
  (OpenAstronomy GSoC page)
- Strictly follow instructions of your organization
- Focus on selection process, Ask for process if you can’t find one
- Ask questions about projects of your interests to mentors
- Try to get a bigger picture of what your organization do and where your project will fit into that
- Find their codebase and read contributor’s guideline and/or GSoC guideline
- Setup local coding environment and forks
- Find ‘good first issues’ or ‘gsoc’ and start coding!

Working on a big software

- You don't need to know everything about the program.
- You should know what the application does from user perspective. Run it and explore its features.
- You should know what's the high level design of the program.
- You only need to know the details of the part you are interested in working in.

First contact!



Google Summer of Code

First contact with mentors

- Contact your mentors only via their preferred channel of communication
- Introduce yourself personally and let them know that you are interested in their project and if you have any past experiences related to that project.
- If you have any questions about ‘what to do next’ then first tell them ‘what have you done till now’ in context of your question and **ASK SPECIFIC QUESTIONS**.
- Read old conversations in community especially which includes your mentors and/or project and if it answer your questions then don’t ask them again
- Be respectful and extremely polite
- Mentor is help. Don’t irritate help!

(https://community.jenkins.io/t/i-need-contribution-guide-for-gsoc-2023/4555)

Don’t be like them!

Jaypalsinh Barad @Jdbarad Apr 10 08:58

Hello Sir,

Most humbly, I would like to inform you that my name is Jaypalsinh Barad, and I reside at Dholka, Ahemdabad.

I am writing this mail regarding the available opportunity for Participation On GSoC 2022. I am a student of Computer Engineering at Aditya Silver Oak Institute Of Technology. I am willing to do contribute at your renowned company. I want to do work on enviroCar Voice Command. I create proposal documentation file, where i share ?

Abhigyan Shanker @abx05 Jan 11 20:26

Hello everyone, I am Abhigyan Shanker and I am a sophomore and a Data Science, ML, DL enthusiast. I am totally new here and to opensource and would appreciate any guidance. Thank you!

Basavraj Chinagundi @basavraj-chinagundi Jan 14 20:15

Hello everyone,I am Basavraj Chinagundi ,junior year ECE&CS student. I have been working in ML,DL field for the last two years have some research papers coming down the line. Looking to contribute to ML4SCI ,if anyone could help me get started would mean a lot!

Fatima Jawadwala @fatemajawad Mar 12 10:56

@fatemajawad

Hello There ,

my name is Fatima Jawadwala I am studying electronics communication and I love coding I am very interested in open source and want to be part of your organisation in gsoc !

Any suggestions/ guidance on how to contribute to ML4SCI would be highly appreciated. Please feel free to reach out.

email: fatemajawadawala8@gmail.com

Never!!!

Anurag verma @anurag629 Oct 26 07:08

hey, I want to contribute to this org. I have knowledge of deep learning, TensorFlow, and Django, and done with Face recognition, digit classification, and object detection using TensorFlow. Based on my profile suggest to me any project to which I can contribute with minimal effort. Thanks!

Mohamed Mostafa

Hello folks,

I want to reach out to the mentors of this project please

This screams to the people that you are not willing to put efforts in your contributions!

akashv

Hello everyone, I have read all the docs regarding guidelines and idea list and got interested in "HelioViewer Python API Wrapper Project Idea". Is there any issue or anything else that I can pick up on to better understand the code base related to our problem.

DavidPS

👋 A akashv - for that I'd suggest you jump to the #sunpy:openastronomy.org channel and get the answer to your questions there! Have fun!

Mon, Mar 14 2022

akashv

> DavidPS
> 👋 A akashv - for that I'd suggest you jump to the #sunpy:openastronomy.org channel and get the answer to your questions there! Have fun!

Alright thank you

This is Akash.
Akash read all the guidelines before asking.
Akash told mentors that he read guidelines.
Akash expressed his interest in specific project.
Akash asked specific question.
Be like Akash.

Queries regarding GSoC '22

Inbox ×

Mihir Tripathi <mihirtripathi97@gmail.com>
to sipocz.brigitta, jvdmc, d.perez-suarez

Feb 16, 2022, 6:59 PM

Hello Admins,

My name is Mihir Tripathi. I have completed my master's degree recently in Physics (astronomy and astrophysics) from the Tata Institute of Fundamental Research (Mumbai). I want to take part in the Google Summer of Code 2022 with OpenAstronomy.
I am writing this mail to seek some help and guidance from you.

Working as a research student in the field of astronomy, I am a frequent user of packages like Astropy, CASA, Photutils, Scikit-learn, etc. During my post-graduation, I have worked on a year-long project based on a study of protoplanetary disks around young stars. My interest in astronomy and technology inspired me to contribute to the development of such tools for astronomers. Therefore I want to take part in GSoC-22 and work on projects offered by OpenAstronomy.

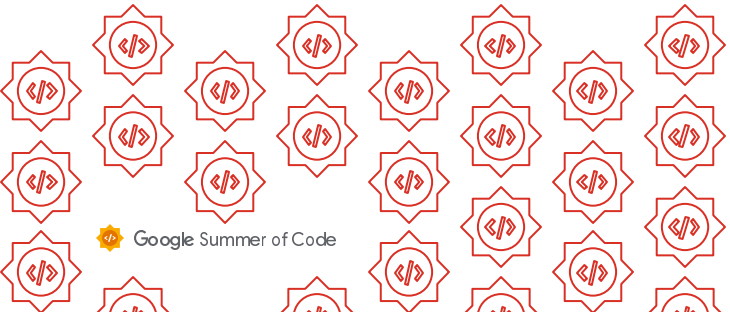
As instructed on the OpenAstronomy webpage for GSoC, I have gone through various guidelines and quick links and I have also connected to different communities of member organizations. I request you to kindly give me further guidance for following points:

1) I am particularly interested in contributing to a project where my prior knowledge of astronomy can be helpful. Being an astronomer I am familiar with the underlying physics and mathematics behind various tools that packages like Astropy or Glue offer. I also understand what kind of functionality and flexibility would a typical user appreciate from such tools. I would like to work on a project that involves the development or improvement of such features. It will be a big help if you can direct me to someone with whom I can discuss it and take it to the next step.

2) The project ideas from Astropy are not released yet on the website. I would be delighted to work on a project from Astropy as I have been a user of it. So if possible can you please guide me towards someone from the Astropy community whom I can contact to discuss potential projects.

3) I am interested in knowing more about projects that I can do in Casacore, but I did not find any chat channel or mailing list for discussion on Casacore projects. I would be really grateful if you can please let me know whom I should contact for it.

GSoC prep in Feb-March



What to do in Feb-March (Officially)?

- **February 22 - 18:00 UTC :** List of accepted mentoring organizations will be published
- Narrow down final 2 or maximum 3 projects
- Start contributing ASAP
- Communicate with mentors whenever you require assistance in specific things which you can’t solve by yourself or with the help of other contributors
- Start reading theoretical parts of the projects if needed for proposals
- Ask mentors for permission to start drafting proposal
- Prepare draft proposals and get it reviewed by mentors
- Prepare final proposal as per mentor’s feedback
- Finally, submit the proposals before deadline!

Wait for the results!

Not confident enough for GSoC ?

- Girl script summer of code – GSSoC
- Winter of codes at different IITs
- Hacktoberfest
- Open source contributor’s workshops and talks
- Read blogs of past GSoC contributors and talk with them
- Just apply to get more familiarity
- Improve lacking skills and apply again
- Prepare together with friends

Other programs like GSoC

- Outreachy (better than GSoC in some aspects):
  - For girls & LGBTQA
  - Better stipend(7000$) and better opportunities
  - Well defined structure after selection
  - Tough to get into (acceptance rate: Outreachy - 1.25%, GSoC - 30%)
- MLH Fellowship
- LFN Mentorship Program
- Igalia Coding Experience Program
- Linux Kernel Mentorship Program

(https://github.com/deepanshu1422/List-Of-Open-Source-Internships-Programs)

Quick links

- Communication best practices:
  - https://google.github.io/gsocguides/student/communication-best-practices
- How to get a head start:
  - https://google.github.io/gsocguides/student/how-to-get-a-head-start
- Open source culture:
  - https://google.github.io/gsocguides/student/open-source-culture
- Making first contact:
  - https://google.github.io/gsocguides/student/making-first-contact

Questions?