



Getting Started With Open Source & MORE

Trivia

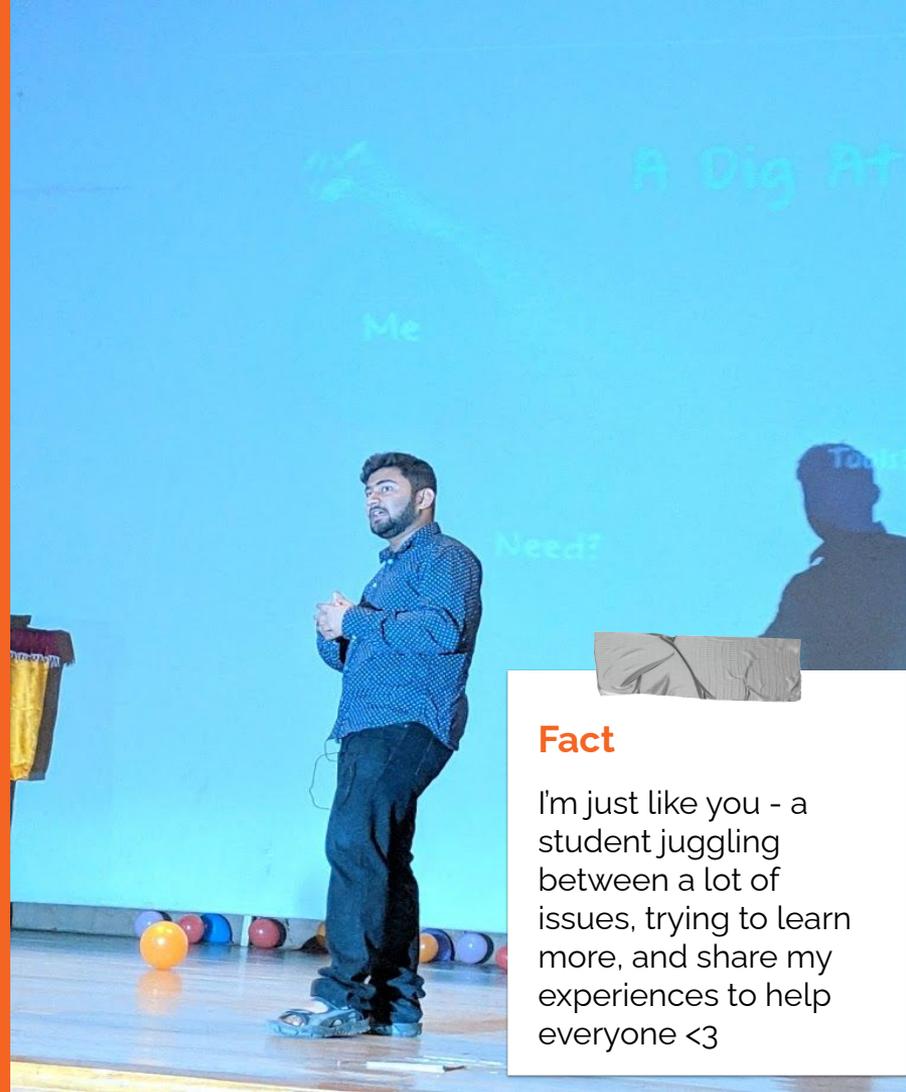
can you **identify the organisation** the above mascot represents?

Shivam Kumar Jha
GirlScript Regional Summit 2020 West Bengal

I'm

- a student (let's be friends?)
- open source contributor for three years
- member (mentor) at [CCExtractor](#)
- working on a medical startup [zealth-ai](#)

I would **love discussions** and **getting to know you**, so please feel free to reach through [Cogito, Ergo Sum](#)



Fact

I'm just like you - a student juggling between a lot of issues, trying to learn more, and share my experiences to help everyone <3

What Do You Want To Take Away From This Discussion?



Hint

**you are going to be
an *Open-Sourcerer***
ready to learn,
contribute, be part of
communities and
participate in open
source programs

What Do You Understand By Open Source?



Fact

every answer, every understanding is correct... **enthusiastic attempt is what sets you apart**, in open source as well!

What Is Open Source?

open source is
the only right
way to do
software

[Linus Torvalds](#)

refers to something
people can modify
and share because
its design is
publicly accessible

opensource.com

denoting software
for which the
original source
code is made freely
available

[Wikipedia](#)

I don't care about free software, if this is open source, bye-bye!

—

Open Source is your
path to learning
software
development in the
contemporary world



Note

this is a self made
definition for **aligning
open source to our
goals** and ambitions



Why Should I Do Open Source?

First, and foremost, do open source for yourself!

- **Experience**
you've learnt python (or node or java or ruby), now what?
- **Technologies**
knowledge about documentation, APIs, methods, and lots more
- **Mentorship**
find experienced mentors to help you learn and seek direction
- **Communities**
become part of enriching communities to grow
- **Altruism**
become part of enriching communities to grow
- **Monetary Perks**



Fact

all these attributes eventually will **lead to you becoming more skillful** and getting **better career opportunities** (eg. placements)

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Talk Is Cheap, Show Me The Way...



Trivia

can you **guess the original quote** by *Linus Torvalds*, the founder of Linux?

Your Open Source Journey

Learn A Language

language you enjoy the most or find simplest

Find Issues To Solve

beginner friendly good to start with contributions

Prepping

Contributing & Growing

Trivia

what is the full form of **VCS**?

How To Use VCS & More

Git, GitHub, command line, IDE (optional), etc.

Find Your Family

Contribute more to learn and fit into open source communities

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I'm Ready, Tell Me **What To** **Learn!**



Trivia

do you know what is **unstructured learning**, the most important ingredient of rising above average?



Credits: CIMB Mascot

Meet Octo.

In his school, for years, teachers told him what he should learn, what books to read, and how to score good!

Now, in college, he loves open source and wants to contribute, but there is no teacher to tell him what exactly to learn, what resources to follow, and how to “score well”! 😞

He is very confused just like us, let’s try to help him!

Follow Unstructured Learning

What

learning required when delving into a new field with no set path; opposite of schools

Why

“The world rewards you for creating things it doesn’t know how to get for itself” - Naval Ravikant

How

ask questions, try and fail, search and explore, immerse yourself, teach others, look stupid!

It’s tough in the beginning, and perseverance is required!

Source: [The Hard Things About Learning Hard Things](#)

How To Use VCS & other tools

All open source projects use Version Control System, code hosting platform, and development is super easy using command line.

- [Learn Git](#), the most popular Version Control System
- [Learn GitHub](#), the most popular git-based code hosting platform
- Get comfortable with powers of command line:
[For Linux](#) Or [For Windows](#) (I RECOMMEND LINUX)
- Install Integrated Development Environments (example VSCode, PyCharm, Netbeans, etc.)



Trivia

do you know what is a **version control system**, the magic wand that makes developments in large teams a cake-walk?

—

Octo Is Ready, Or Is He?

Octo, after pestering seniors with questions, reading lots of articles, trying it by himself, facing issues and resolving them, has learned **how to use** programming language, git, GitHub, installed linux to harness the power of command line, and chose VSCode as his IDE.

He excitedly goes to GitHub, BOOM! There is code everywhere and all he knows is syntax.

He gets perplexed and upset. Let's help him again!

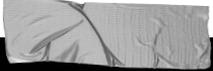


Credits: CIMB Mascot

Find Easy Tasks To Do

We only know syntax at this moment, and we will grow one step at a time, starting small!

- Projects of seniors/clubs are good place to start
- Issues related to documentation, small bugs, grammatical fixes, etc.
- Find easy issues at goodfirstissue.dev , firsttimersonly.com
- Aim is to practice learnt skills, form understanding of “how syntax is used” to develop tools, and enjoying!



My First Commit

my first ever open source contribution was [adding my roll number in a sandbox repository](#) and I was on cloud nine for the day ;)

Easy Issue Example

Create Issues And Pull Request Templates #56

Edit

New issue

 Closed

5 comments



thealphadollar on Nov 21, 2019

Member



Tip ...

To remove the discrepancy between how issues and bugs are created and to enforce a standard across the same, we should have templates for Issues and PRs. This will help in a standarisation of bug reporting and patching.

Below are two resources which can be used for looking for suitable templates:

- [stevemao/github-issue-templates](#)
- help.github.com/en/github/building-a-strong-community/creating-a-pull-request-template-for-your-repository

In the bug report, it is advisable to have the following fields:

- Summary
- Actual Behaviour
- Expected Behaviour
- Steps To Reproduce
- Screenshots, if applicable
- Other Relevant Information (System info, browser etc)

In the PR, it is advisable to have the following fields:

- Summary
- Details About The Changes
- Screenshots, if applicable
- Bugs Introduced By The Patch
- Reference Concerned Issues

Assignees – assign yourself



Labels



[Hacktoberfest](#) [KWOC](#) [easy](#)
[enhancement](#) [good first issue](#)

Projects



Milestone



Linked pull requests



Notifications

Customize

You're receiving notifications because you modified the open/close state.

 Unsubscribe

2 participants



 Lock conversation

Easy Issue Example

Add email link on pip's documentation #8783

New issue

Open

10 comments · May be fixed by #8848



nlhkabu 19 days ago · edited

Member

Tip

What?

We want to add a way for users to give feedback on the pip docs, *while* they are using them.

Why?

Our goal is to understand what problem the user is trying to solve, what information is helpful, what is unhelpful, and what is missing. Understanding this will help us improve the pip docs for future users.

How?

Initially, we want to add an email link to each documentation page to encourage users to provide us with feedback. This should be a standout box, and contain a message that is something like this:

Did this article help?

We are currently doing research to improve pip's documentation and would love your feedback. Please [email us](#) and let us know:

1. What problem were you trying to solve when you came to this page?
2. What content was useful?
3. What content was not useful?

Where?

It would be great to include this message either:

- At the end of each article
- As a "sticky" message either at the top or right hand side of the page

K: UX good first issue type: docs

type: feature request

Linked pull requests

Add initial sphinx ext for per-doc feedba...

Notifications

Customize

You're not receiving notifications from this thread.

Subscribe

5 participants





Credits: CIMB Mascot

Octo, The Open Sourcerer.

With your help, his efforts, and using principles of unstructured learning Octo has been contributing to open source for quite sometime now and gradually increasing difficulty levels of issues he solves.

He gets to know his seniors participated into GSoC, [KWOC](#), and other open source programs.

Let's help Octo understand how and shine!



GSoC

- Google Summer of Code
- By Google
- Happens During Summer (surprise!)
- Stipend Of \$3000
- Organisations from all fields
- All doubts answered [here](#)
- All program information [here](#)

GSoC is considered as the most prestigious and pioneer open source programs.





MLH Fellowship

- Has Two Tracks: Open Source & Hackathons
- By GitHub
- Happens Thrice A Year
- Need Based Stipend Upto \$5000
- All doubts answered [here](#)
- All program information [here](#)

MLH is one of the new open source (and portfolio development) programs for students to build skills.

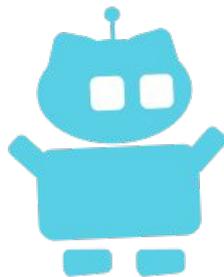




Outreachy

- For Groups Underrepresented In Tech
- By Multiple FOSS Communities
- Relatively Easy To Get Selected
- Handsome Stipend of \$5,500
- All doubts answered [here](#)
- All program information [here](#)

Outreachy promotes open source among women, trans men, non-binary people, and genderqueer



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This is not all, **there are dozens of more such programs (find here)** which provide amazing perks and learning



Fact

Did you know there is a list of (almost) all open source programs on GitHub?

Find it [here](#).

Octo Is Ready To Conquer

Octo now knows about open source programs, and the resource where he can find list of many more such programs. He is charged, and is ready to conquer the world.

After months of solving issues, learning usage of Git & GitHub, gaining knowledge from seniors, he is ready to climb to the top.

Let's help him with some brownie points and wish him all the best!



Credits: CIMB Mascot



How Can I Increase My Chances?

Programming is just the tip of the iceberg; slowly learn more to improve your odds.

- **Practice Reading And Understanding Large Codebases**
can be overwhelming without right method and mindset
- **Write Good Documentation**
not the only one working on the code; start [here](#), learn as you go
- **Write Clean & Reusable Code**
most communities have guidelines; start [here](#)
- **Follow Pull Request And Commit Guidelines**
Most communities have guidelines; pr start [here](#), commits start [here](#)
- **Build Proof of Concept Of Complex Ideas**
issues (especially new features) can be very complex, PoC helps simplify, understand, and list technologies to learn

Understanding Large Codebases

everyone who starts from syntax towards software development faces the problem

You Are Not Alone

go one file at a time, one function at a time, compile & run the program, put "*print*" commands

Divide And Conquer

ask for help from maintainers and other members, post questions and doubts, don't be shy

Ask For Help

It will not make sense in the start, only if you persevere and struggle it'll come to you eventually.



How Can I Increase My Chances?

Communication etiquette is key to open source; most organisations have contribution guidelines, prefer active engaged contributors.

- **Start Early, Join Early**
join community and start contributing early, jump right in!
- **Ask Questions Smartly**
do your homework and struggle beforehand; start [here](#)
- **Engage In Discussions**
be active, share your views, comment on issues
- **Help Others, Become A Part Of The Community**
help newcomers with your knowledge, discuss their problems
- **Create A Larger Motive**
have a larger ambition; maybe staying as a member for long



Fact

Admins and mentors mostly **prefer students who will enrich their community** over students who are just there for a program

—

It can get
overwhelming, **take**
one step, one jump
at a time to climb to
the top



Trivia

Have you heard about
the concept of
**minimum viable
motivator?**

Source: [here](#).



Learn From Experiences Of Others

Beginning with open source is a slow, struggling, and very rewarding experience; everyone feels it is impossible at the start.

- [My Journey Through Open Source - Prateek Chanda](#)
- [A Beginner's Very Bumpy Journey Through The World of Open Source](#)
- [Why you should think twice about contributing to Open Source](#)
- [The Definitive Guide to Contributing to Open Source](#)
- [What open source project should I contribute to?](#)



References & Further Readings

Below are the pieces that have influenced the presentation and are recommended for further reading and understanding.

- [Work effectively on a large codebase](#)
- [How contributing to open source projects can improve your engineering resume?](#)
- [How to engage with the open source community?](#)
- [An Informal Introduction To KWoC](#)
- [Beginner's guide to open-source contribution](#)
- [GSoC: How? This? That?](#)

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Is it already
time to say
goodbye? :(

It'll take time, and we'll make it there!

I sincerely **thank you**
for your interest &
zeal to contribute to
open source.



Tip

[Hacktoberfest](#) is coming in 20 days, are you excited to contribute and get the limited edition T-shirt?

Find slide deck at bit.ly/gweb2020 | Reach me at thealphadollar.me



Credits!

The slides have been prepared and reviewed with help from a lot of amazing individuals, most notably,

- **Willem**
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