

OPEN SOURCE SOFTWARE DEVELOPMENT

Creating an OSS project

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SLIDES BASED ON

- <https://opensource.guide/starting-a-project/>
- Fogel, Karl. **Producing Open Source Software.**
<https://producingoss.com/>
- Steinmacher, Igor; Treude, Christoph; Gerosa, Marco Aurélio. **Let me in: Guidelines for the Successful Onboarding of Newcomers to Open Source Projects**, IEEE Software.
http://www.igor.pro.br/publica/papers/IEEESoft_2018.pdf

STARTING IT

- Use what you have
- Different paths
 - Own project → Open
 - Corporate project → Open
- Decide the scope and make it clear
 - What is it about?
 - What is it not about?

**“WHAT’S
IT ALL
ABOUT?”**

MAKE THINGS CLEAR

- All the knowledge about the project needs to:
 - **Be public**
 - **Be detailed**
- Outsiders need to quickly understand all the details
 - **Design docs**
 - **User manuals**
 - **Next steps (future features)**
 - **How To's**
 - **Code standards**
- Reduce the “*hacktivation energy*” [See Fogel's]

NAME AND SURROUNDINGS



Choose a name that represents the goal of the project

But easy to say and remember



Look around for trademarks, projects with same name etc.



Having a domain is interesting

checking for the name
looking for the .org, .net,
.com also helps looking for
already existing things

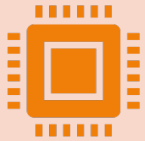
STARTING THE README FILE

- When creating your page/repository make it clear that the project is free/open
- Create one short paragraph describing the mission of the project

The Apache™ Hadoop® project develops open-source software for reliable, scalable, distributed computing.

The Apache Hadoop software library is a framework that allows for the distributed processing of large data sets across clusters of computers using simple programming models. It is designed to scale up from single servers to thousands of machines, each offering local computation and storage. Rather than rely on hardware to deliver high-availability, the library itself is designed to detect and handle failures at the application layer, so delivering a highly-available service on top of a cluster of computers, each of which may be prone to failures.

LIST THE FEATURES AND REQUIREMENTS



What does this software do?



What is planned for it? (Future features)



What do I need to run
your project?

OS, compiler, disk space,
etc.

ISSUE TRACKER



Public issue tracker is needed

Report bugs
Check the project activity
Contribute



Curating the issue tracker is a constant and infinite task

VERSION CONTROL

You MUST have your code in a version control system

- For GitHub it is easy, we know

It is not only about having it

- Maintaining
- Receiving/reviewing code
- Use the same way as ANYONE needs to use

CREATE COMMUNICATION MEANS



More than the Issue Tracker



Open Source is a collaborative endeavor

Communication is key



Extra ways to communicate are interesting

Slack, Discourse, IRC, mailing list



Challenge!!!!

Answering

Empty channels/quiet forums are demotivating

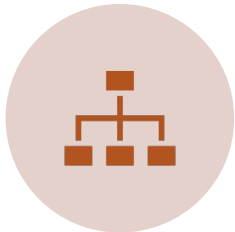
MAKE IT EASY TO CONTRIBUTE



Create a contribution
(newcomer-friendly)
page or portal



What are the skills
needed



Structured
documentation (see
flosscoach.com)



Give one tutorial-
style example of how
to do a common task



Maintain a FAQ

MAKE IT EASY TO CONTRIBUTE



Create a contribution
(newcomer-friendly)
page or portal



Identify and/or
dismiss outdated
information



Point newcomers to
easy tasks



Keep the issue list
up-to-date



Make it easy for
newcomers to build
the system locally



Document the code
structure

How?!?

Starting an Open Source Project

Learn more about the world of open source and get ready to launch your own project.

Table of Contents ▼



- <https://opensource.guide/starting-a-project/>

Community profile

Here's how this project compares to [recommended community standards](#).

Checklist

<div><div></div></div>	
✓ Description	
✓ README	
● Code of conduct	<div>What is a code of conduct?<div>Add</div></div>
✓ Contributing	
✓ License	
● Issue templates	<div>Add</div>
● Pull request templates	<div>Add</div>

README FILE

- What does this project do?
- Why is this project useful?
- How do I get started?
- Where can I get more help, if I need it?
- How you handle contributions,
- What are the goals of the project?

README FILE

igorsteinmacher Merge pull request #18 from clockian-NAU/master ...		Latest commit 9fdbfab 4 days ago
📁 assignments	Update mediatingSchedule.md	10 days ago
📁 documents	Syllabus	23 days ago
📁 notes	Fixing PPTx	6 days ago
📄 .gitignore	Fixing PPTx	6 days ago
📄 LICENSE	Create LICENSE	24 days ago
📄 README.md	Update README.md	12 days ago
📄 Syllabus.pdf	Adding the syllabus	23 days ago
📄 assignments.md	Update assignments.md	23 days ago
📄 groups.md	Added Group 3 GitHub usernames	4 days ago
📄 outline.md	Update outline.md	7 days ago
📄 papers.md	Update papers.md	23 days ago
📄 shorttalks.md	Update shorttalks.md	24 days ago

📄 README.md

CS499-2018 - Open Source Software Development

[Syllabus HERE](#)

Instructor: Dr. Igor Steinmacher

Email: Igor.Steinmacher@nau.edu

Office Hours: TuTh 09:30AM – 11:20AM; Room 090-115. I also welcome and encourage students to ***schedule appointments in different hours.***

SLACK: Please hangout, discuss, create channels for specific groups and issues. [Click here](#) to join the course Slack

CONTRIBUTING FILE

How to file a bug report

How to suggest a new feature

How to set up your environment

Coding standards/code styles

Your roadmap or vision for the project

How contributors should (or should not) get in touch with you

CONTRIBUTING FILE

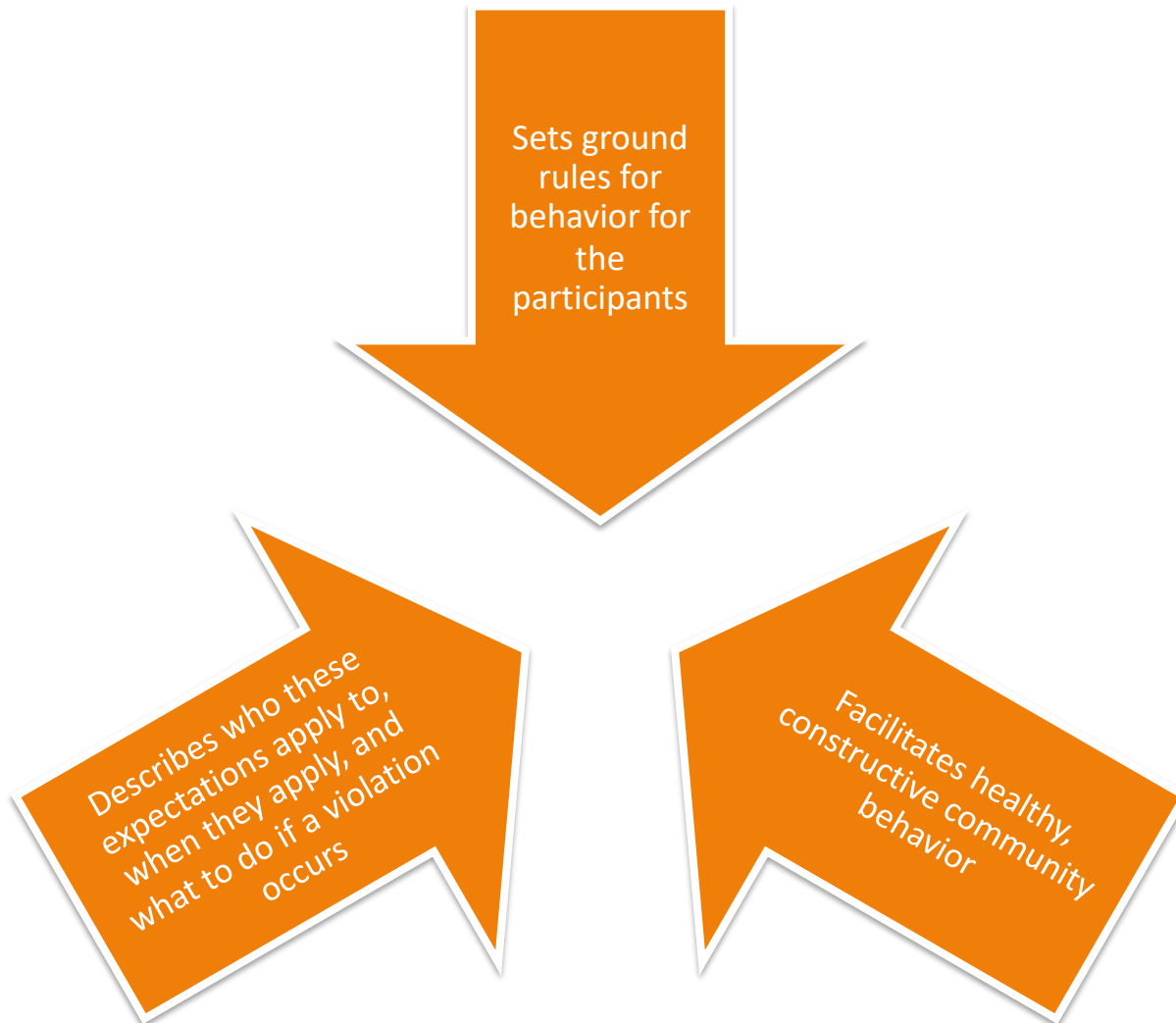
CONTRIBUTING file can be simple (for starters)

FAQ section fits good here

Link to your CONTRIBUTING file from your README

Nice template: <https://github.com/nayafia/contributing-template/blob/master/CONTRIBUTING-template.md>

CODE OF CONDUCT



YOU CAN ALSO DO



Create Issues and Pull requests templates



Checklist of what is expected for the Pull request or Issue

Communicate what you want the contributors to report/do

Documentation

- ☐ Project has a LICENSE file with an open source license
- ☐ Project has basic documentation (README, CONTRIBUTING, CODE_OF_CONDUCT)
- ☐ The name is easy to remember, gives some idea of what the project does, and does not conflict with an existing project or infringe on trademarks
- ☐ The issue queue is up-to-date, with issues clearly organized and labeled

Code

- ☐ Project uses consistent code conventions and clear function/method/variable names
- ☐ The code is clearly commented, documenting intentions and edge cases
- ☐ There are no sensitive materials in the revision history, issues, or pull requests (for example, passwords or other non-public information)

People

If you're an individual:

- ☐ You've talked to the legal department and/or understand the IP and open source policies of your company (if you're an employee somewhere)

If you're a company or organization:

- ☐ You've talked to your legal department
- ☐ You have a marketing plan for announcing and promoting the project
- ☐ Someone is committed to managing community interactions (responding to issues, reviewing and merging pull requests)
- ☐ At least two people have administrative access to the project

THE ASSIGNMENT!!!

- Analyze 3 projects hosted on GitHub (real software projects) and check which good practices they follow and what should be improved
- Create a project under github.com/NAU-OSS
- Follow the guidelines at <http://opensource.guide>
- Think about all the details of the project
- Details here: <https://github.com/igorsteinmacher/CS499-OSS/blob/master/assignments/openYourProject.md>