

Working with Github

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What is GitHub?

- GitHub is a code hosting platform for version control and collaboration.
- It lets you and others work together on projects from anywhere.
- No coding necessary.





Basic components

- Repositories
- Commits
- Branches
- Pull requests





Repositories

- Usually used to organize a single project.
- Can contain folders and files, images, videos, spreadsheets, and data sets.
- Anything that your project needs.





Creating a repository



Owner **Repository name**

PUBLIC   **hubot** / 

Great repository names are short and memorable. Need inspiration? How about **petulant-shame**.

Description (optional)

Just another repository

- ☒  **Public**
Anyone can see this repository. You choose who can commit.
- ☐  **Private**
You choose who can see and commit to this repository.

☒ **Initialize this repository with a README**

This will allow you to `git clone` the repository immediately. Skip this step if you have already run `git init` locally.

Add .gitignore: **None** ▼

Add a license: **None** ▼



Create repository





Commits

- On GitHub, saved changes are called commits.
- Each commit has an associated commit message.
- Description explaining why a particular change was made.
- Commit messages capture the history of your changes, so other contributors can understand what you've done and why.



Making a commit



hubot / hello-world


Unwatch 1Star 0Fork 0

<> CodeIssues 0Pull requests 0WikiPulseGraphsSettings

hello-world / README.md or cancel

<> Edit filePreview changesSpaces2Soft wrap

1 # hello-world
2
3 Hi Humans!
4
5 Hubot here, I like Node.js and Coffeescript (that's what I'm made of!).
6 I've had tacos on the moon and find them far superior to Earth tacos.
7

Hubot

Commit changes

Finish README

And mention moon tacos

☒ Commit directly to the `readme-edits` branch
☐ Create a **new branch** for this commit and start a pull request. [Learn more about pull requests.](#)

Commit changesCancel






Branches

- Branching is the way to work on different versions of a repository at one time.
- By default the repository has one branch called master which is considered to be the definitive branch.
- Use of branches to experiment and make edits before committing them to master.
- By creating a branch off the master you are making a snapshot of master as it was at that point in time.



Creating a branch



 This repository Search Pull requests Issues Marketplace Explore

ioannitsanaktsidis / test

Unwatch 1 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Settings Insights

This is a first example [Add topics](#) [Edit](#)

2 commits 1 branch 0 releases 1 contributor MIT

Branch: master New pull request

Create new file Upload files Find file Clone or download

Switch branches/tags

experiment

Branches Tags

Create branch: experiment from 'master'

Addition of new line

Initial commit

Addition of new line

Latest commit 34f5517 6 minutes ago

27 minutes ago

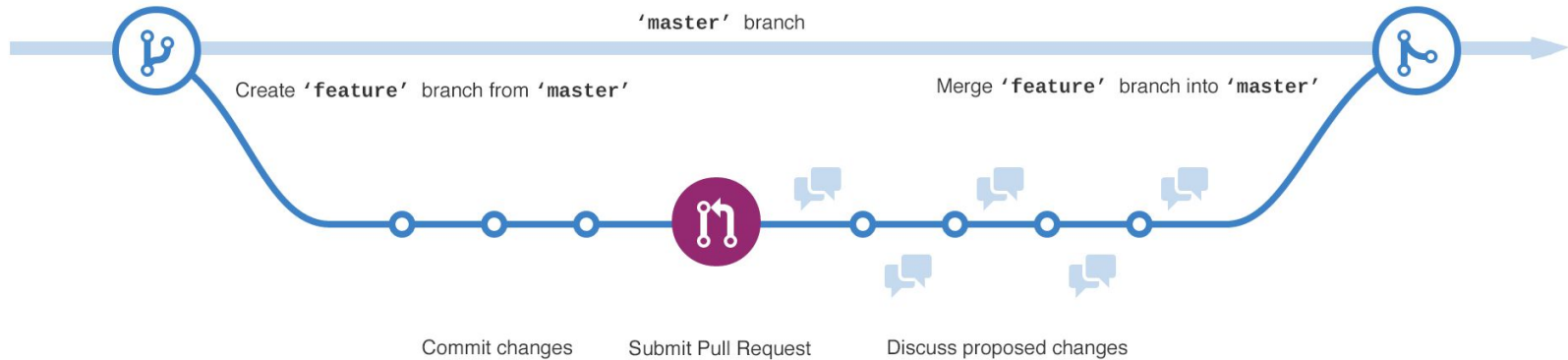
6 minutes ago

test

This is a first example Lets add a new line



Lifetime of branch





Pull requests

- The heart of collaboration on GitHub.
- Proposing your changes.
- Requesting that someone:
 - Review.
 - Pull in your contribution.
 - Merge them into their branch.
- Show differences, of the content from both branches.





Open a pull request

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base fork: cernanalysispreservation/an...
base: master
head fork: ioannitsanaktsidis/analysis...
compare: testing
✓ Able to merge. These branches can be automatically merged.

Please review the [guidelines for contributing](#) to this repository.

global: addition of login button

Write Preview

AA B i “ < > ☰ ☷ ☹ ↶ @

Signed-off-by: Ioannis Tsanaktsidis <ioannis.tsanaktsidis@cern.ch>

Attach files by dragging & dropping, [selecting them](#), or pasting from the clipboard.

☒ Allow edits from maintainers. [Learn more](#)

Create pull request

Labels

None yet

Milestone

No milestone

Assignees

No one—assign yourself

1 commit

1 file changed

0 commit comments

1 contributor

Commits on Nov 15, 2016

ioannitsanaktsidis global: addition of login button

488dc87

Showing 1 changed file with 7 additions and 4 deletions.

Unified Split



Merge pull request

- Final step.
- Bring changes together.



This branch has no conflicts with the base branch

Merging can be performed automatically.



Merge pull request

You can also [open this in GitHub Desktop](#) or view [command line instructions](#).



Pull request successfully merged and closed

You're all set—the `readme-edits` branch can be safely deleted.



Delete branch



Github-Zenodo integration



Zenodo



- Zenodo helps researchers receive credit by making the research results citable.

The screenshot shows the Zenodo website's main interface. At the top is a blue header with the 'zenodo' logo, a search bar, and links for 'Upload' and 'Communities'. On the right of the header are 'Log in' and 'Sign up' buttons. Below the header, the 'Recent uploads' section features three entries. Each entry includes a date tag (e.g., 'November 14, 2016'), category tags (e.g., 'Software', 'Open Access'), a title, author names, a brief description, and an upload date. To the right of each entry is a 'View' button. On the right side of the page, there are three informational boxes: 'Sep 12: Major update' with a flag icon, 'Using GitHub?' with the GitHub logo, and 'Zenodo in a nutshell' with a list of bullet points. The bottom right corner of the image shows a cluster of colorful puzzle pieces.

zenodo Search Upload Communities Log in Sign up

Recent uploads

November 14, 2016 Software Open Access View

gdietz/OpenMEE v1.0.0
George Dietz; byron wallace
intuitive software for ecological and environmental meta-analysis
Uploaded on November 14, 2016.

November 8, 2016 Journal article Open Access View

Parametric modeling and model order reduction for (electro-)thermal analysis of nanoelectronic structures
Feng, Lihong; Yue, Yao; Banagaaya, Nicodemus; Meuris, Peter; Schoenmaker, Wim; Benner, Peter
In this work, we discuss the parametric modeling for the (electro-)thermal analysis of components of nanoelectronic structures and automatic model order reduction of the consequent parametric models. Given the system matrices at different values of the parameters, we introduce a simple method of ...
Uploaded on November 14, 2016.

November 13, 2016 Software Open Access View

Analysis of point mutations in humans

Sep 12: Major update
Welcome to the improved Zenodo. See [what's new](#) and [known issues](#).

Using GitHub?
Just [Log in](#) with your GitHub account and [click here](#) to start preserving your repositories.

Zenodo in a nutshell

- **Research. Shared.** – all research outputs from across all fields of research are welcome! Sciences and Humanities, really!
- **Citeable. Discoverable.** – uploads gets a Digital Object Identifier (DOI) to make them easily and uniquely citeable.
- **Communities** – create and curate



Archive Github repository on Zenodo

- Login to Zenodo through Github
- Set up Zenodo-Github synchronization
<https://zenodo.org/account/settings/github/>
 - Zenodo can only archive public repositories
- Release Github repository, trigger new entry in Zenodo.
 - Optional: complete the metadata by editing the zenodo records, e.g. author affiliation, keywords, license, zenodo community, grants etc.
- Take DOI badge from Zenodo and add to Github repo's readme file.

zenodo

Log in to account

Log in with GitHub

Log in with ORCID

— OR —

Email Address


Password


Log In

New to Zenodo? Sign Up

Forgot password?



 This repository Search Pull requests Issues Gist

 xchen101 / test-for-zenodo-integration Unwatch 1 Star 0 Fork 0

[Code](#) [Issues 0](#) [Pull requests 0](#) [Projects 1](#) [Wiki](#) [Pulse](#) [Graphs](#) [Settings](#)

this repo is created for testing Github-Zenodo integration <https://xchen101.github.io/test-for-zenodo-integration/> — Edit


5 commits







2 branches


3 releases

1 contributor


Branch: master New pull request Create new file Upload files Find file Clone or download

 xchen101 committed on GitHub changed the doi badge Latest commit ef61747 4 days ago

 bibliography	New Article!	a month ago
 figures	New Article!	a month ago
 README.md	changed the doi badge	4 days ago
 layout.md	New Article!	a month ago
 title.md	edited title.md	5 days ago
 untitled.md	New Article!	a month ago

 README.md

This project investigate exactly how "open" can the process of High Energy Physics research be.

 DOI 10.5281/zenodo.166272

Interviews with HEP scientists at CERN were carried out to find out their research workflow and information practices, then opportunities and barriers for opening up the research process are identified and evaluated.





References

Understanding the GitHub Flow <https://guides.github.com/introduction/flow/>

Making Your Code Citable <https://guides.github.com/activities/citable-code/>

Smith AM, Katz DS, Niemeyer KE, FORCE11 Software Citation Working Group. (2016) Software Citation Principles. PeerJ Computer Science 2:e86. DOI: [10.7717/peerj-cs.86](https://doi.org/10.7717/peerj-cs.86)





ANY
Questions?

