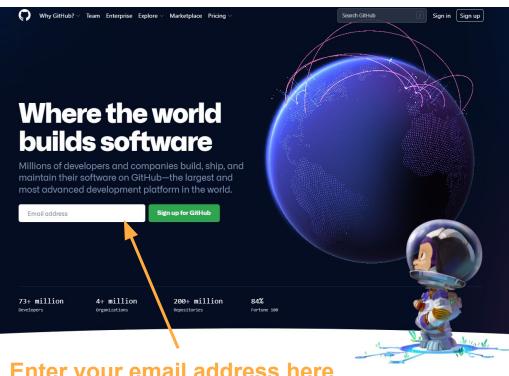


Go to github.com

Step 1: Sign-up

Step 2: Log in



Enter your email address here and click green button

Session 1 -GitHub Basic Intro

Emma Karoune

- Adapted from: Esther Plomp's Github Intro workshop
- References: Mozilla Science Lab's Study Group Orientation,
- Friendly GitHub Intro by Kirstie Whitaker &
- Visual description: https://learngitbranching.js.org/
- The Turing Way's 'Getting started with Github'
- Other resources:
- Developing Collaborative Documents Click here for the paired online materials
- by Malvika Sharan





Learning outcomes -Session 1

- To list some examples of use of Github.
- To be able to navigate the Github interface.
- To set up a personal repository.
- To start using markdown script.



Learning outcomes -Further sessions

Session 2 - Collaboration with Github

- To know what Version control is.
- To start using a collaborative workflow in Github.

Session 3 - Further uses with Github

- To know how to set up project management boards.
- To set up a simple Github webpage.

We won't be covering:

- Git through the command line see for example <u>Version Control with Git</u> by the Carpentries
- Using a programming language with Git see <u>slide 105</u> for R examples



Schedule

0:00 - 0:15 Log in and setting up a GitHub account

- 0:15 0:25 Intro to session
- 0:25 0:45 Why use Github?
- 0:45 1:00 Creating first GitHub repository
- 1:00 1:10 Break
- 1:10 1:45 Markdown and editing README.md file
- 1:45 2:15 Adding a license
- 2:15 2:30 Final tips, Wrap up, questions.



Code of Conduct

Yes / Encouraged

- Show empathy and kindness toward others
- Be respectful of differing opinions, viewpoints, experiences and technological choices
- Give and gracefully accepting constructive feedback
- Take responsibility for mistakes and any impact on others, learn from the experience
- Taking breaks to recharge!



Code of Conduct

No harassment

- Verbal and text comments that reinforce social structures of domination _ related to gender, gender identity and expression, sexual orientation, ability, physical appearance, body size, race, age, religion or work experience.
- Use of sexual or discriminatory imagery, comments, or jokes -
- Deliberate intimidation, disruption
- Unwelcome sexual attention
- Advocating for, or encouraging, any of the above behaviour -

If the Code of Conduct is violated you will be asked to stop or leave the space.



Please contact about any violations:

Emma Karoune (ekaroune@googlemail.com)

Learning with a growth mindset

- Try to have a go at the activities yourself
- But do ask for help when you get stuck
- There are no silly questions.
- If you need help use the zoom raise hand or write a question in the chat.
 - When ready to move on please do a thumbs up.

In-person

- Use stickies: please use a green for when you're ready to continue, a red one if you're stuck.
- If you're helping someone: try as much as possible to let this person do the typing/fixing and walk them through it. Try to avoid taking over the keyboard and fixing it for them.





© Big Change



Why use GitHub?

It's not just for software, it's for collaborative working on ANY project!

On Github you can:

- Collaborate on projects
- Share your documentation
- Build your own website
- Set up presentations
- Project management
- Continuous integration
- Use as an add-on for repositories

And track all that's been done and who has done the work!



What do you want to be able to do with Github?

Take a moment to think about:

• What will you use Github for?



Use your

Github

profile

page as a

CV



Emma Karoune

Research Associate at The Alan Turing Institute, Turing Way Contributor, Archaeobotanist, SSI Fellow, AEA Committee Member

Edit profile

🕃 Set st...

At 12 followers · 1 following

🗓 The Alan Turing Institute

У @ekaroune

Achievements



Organizations



🛄 Overview 📮 Repositories 22 🗄 Projects 1 🛇 Packages 🏠 Stars 27

EKaroune / README.md Hi there 👏 I'm Emma. I work as a Senior Community Manager of the Turing/RSS Lab and DECOVID project at the Alan Turing Institute. I'm also the Principal Investigator of the FAIR Phytolith Project. I'm a core contributor to The Turing Way. T'm currently working on: · FAIR data implementation through community building and training for FAIR data management. · Papers about reproducible research in archaeology and academic authorship. · Turing way chapters about sensitive data. I'm currently learning to get better at R. . Ask me about my blog - The Open Archaeobotanist How to reach me: Email: ekaroune@turing.ac.uk Twitter: ekaroune ORCID: 0000-0002-6576-6053 Pronouns: she/her

 Pinned
 Customize your pins

 □
 The-Open-Archaeobotanist
 Public
 II

 □
 Image: The-Open-Archaeobotanist
 Public
 III

 □
 Blog about all things open and archaeobotany!
 III
 Host repository for The Turing Way: a how to guide for reproducible data science

 ●
 HTML ☆ 5 ♀ 1
 ● TeX ☆ 1.1k ♀ 439

0

Set up a website CV.

CAREER PROFILE

Research Associate and Community Manager of the DECOVID project, The Alan Turing Institute. Independent archaeobotanist focused on FAIR data in phytolith research and reference collections for the British flora. Active member of The Turing Way community.

EXPERIENCES

Research Associate and Community Manager The Alan Turing Institute, London

2021- FICSC

I am responsible for co-ordinating the different teams of data analysts and clinicians working on the DECOVID project. I ensure communication is effective throughout the project by maintain the Github repositories, using different communication channels to pass on information and ensuring efficient workflow streams. I am also contributing to The Turing Way by writing new chapters concerning scientific communication such as how to write collaborative academic papers and how to deal with authorship on collaborative projects.

Independent Postdoctoral Researcher

2019 - present

Open archaeobotanical research specialising in phytolith analysis. I am currently working on two projects: i) an open project concerning the application of phytolith analysis on British Archaeological sites including investigations into the methodologies used in phytolith analysis to build more robust and reproducible methods; ii) the development of open science practices in phytolith research. The later project has focused initially on assessing the extent of open science in this field and starting to build an open research community (see my project page: https://osf.io/qp68n/). Moving forward, I am collaborating, with my newly formed working group, to expand and consolidate this community, and we have applied for a European Open Science Cloud Digital Life Science Grant to fund a FAIRification project, in which I will be the Principal Investigator.

SEN Science Teacher

2018 - 2020

The Harbour Medical School

Planning and teaching science lessons for pupils aged 11 to 16 with special educational needs -



Emma Karoune

Postdoctoral Researche

Maroune@googlemail.com

ekaroune.github.io/The-Open-Archaeobotanist/

C EKaroune

🔰 @ekaroune

EDUCATION

PGCE in Secondary Science Education

Kingston University 2006 - 2007

hD in Archaeobotany

Institute of Archaeology, University College London 2002 - 2006

MSc in Palaeoecology of Human Societies Institute of Archaeology, University College London

•	EstherPlomp Update 20210902-n19.md	adf3ae0 on Sep	1 🕥 40 commits
	Newsletters	Update 20210902-n19.md	last month
۵	LICENSE.md	Create LICENSE.md	9 months ago
C	README.md	Initial commit	9 months ago

README.md

TNW-PhD-Newsletters

Overview of the newsletters sent to the PhD students of TNW

https://github.com/EstherPlomp /TNW-PhD-Newsletters

Events:

- Four online workshops demonstrating open-source tools in chemistry are taking place in the upcoming months, including ChimeraX, GNINA 1.0 and DataWarrior. See also the recordings from the workshops on DataWarrior, PyMOL, GoogleCoLab, CheMBL, Fragalysis, Knime that were organised before.
- NUI Galway is hosting the third Open Scholarship Week from 10-14 May. Registrations are now open and there is an Open Scholarship Prize Competition (deadline for applications is 16 April)!
- NWO Life2021 (NWO conference for the Dutch Life Sciences) takes place online on the 26-28 of May. Deadline for poster abstract submission is the 8th of April.

The Netherlands eScience Center opened up their call for in-kind investment of a dedicated team of research software engineers (RSEs) from the eScience Center that will work together with you on a project. You will need your supervisor (or someone else with a PhD) for this application. First deadline is **6th of May**.

You can indicate interest for an intermediate Python course piloted by the UK Software Sustainability Institute here.

Working on your next or first publication? Want to publish a protocol?

- Not sure how to structure your publication? This brief guide to writing manuscripts might be of help! (with benefits of Open Science listed on page 6)
- PLOS ONE introduced two new publication formats: Lab Protocols and Study Protocols!
- · How to write a great science paper tips from a novelist
- Watch a short video on how to write an abstract
- Use Recite to check your citations

https://estherplomp.github.io/



ABOUT ME ROLES OUTPUTS TALKS BLOGS LEADERSHIP COPYRIGHT

ESTHER PLOMP

OPEN SCIENCE / RESEARCH DATA MANAGEMENT / HUMAN OSTEOLOGY / ISOTOPE ARCHAEOLOGY

I'm an Open Science enthusiast and I would like to contribute to a more equitable way of knowledge generation and facilitate others in working more transparently. My research interests are osteology/bioarchaeology. I like to listen/read books (see <u>this</u> <u>Twitter thread</u> for some titles), dance, draw and game (Guildwars 2) when I'm not eating pie with friends/family.

Please get in touch about any ideas for collaboration, speaking opportunities, mentorship or to send me some cat pictures via the channels below:



https://uf-repro.github.io/data-organization/slides.html#1 https://github.com/uf-repro/data-organization/blob/main/slide s/slides.Rmd

Your Slides are So Extra! Extra-Special Presentations with xaringanExtra

GARRICK ADEN-BUIE @grrrck



Data Organization in Spreadsheets

Hao Ye

Health Science Center Libraries, University of Florida

(updated: 2021-08-31)

See also:

- https://rmarkdown-shilaan.netlify.app/#1
- <u>https://github.com/shilaan/rmarkdown-session</u>
 <u>on</u>



Date	Title	Duration	Event	Location	Source
Feb 20, 2019	The Carpentries	30min	ELIXIR Bioinformatics Training Tools Workshop	Debrecen, Hungary	0
May 20, 2019	Beer is alive!	30min	Pint of Science	Freiburg, Germany	0
Feb 7, 2019	Galaxy Training Network and Schema.org	10min	Boost Your Visibility – Improving F of FAIR for Dutch Training and Data Resources through Bioschemas	Utrecht, Neth <mark>erl</mark> ands	0
Feb 20, 2019	The training effort of the Galaxy community	30min	ELIXIR Bioinformatics Training Tools Workshop	Debrecen, Hungary	0

http://talks.bebatut.fr/2019/ https://github.com/bebatut-slides/2019

Add on to repositories

Link your Github

Why'

- Zenodo
- **Open science framework**
- Figshare

	🐉 main 🚽 🕻 1 branch 💿 2 tags		Go to file Add file - Code -	About 🐯
hub repos to:	EKaroune updating message		✓ 21e2aaa 8 days ago 🗿 306 commits	Blog about all things open and archaeobotany!
	_posts	update edits from LW	4 months ago	𝔗 ekaroune.github.io/the-open-archaeobo
	asset/img	adding images for lw guest blog	5 months ago	🛱 Readme
	CITATION.cff	updating message	8 days ago	کم View license
_		Create LICENSE	14 months ago	 Cite this repository - ☆ 5 stars
ience	C README.md	updating doi	4 months ago	 2 watching
	🗅 _config.yml	Update _config.yml	14 months ago	왕 1 fork
<u>rk</u>	abcofarchaeobotanicalopenscience.md	adding edi	10 months ago	
	🗅 aboutme.md	Update aboutme.md	14 months ago	Releases 2
	Contactme.md	Rename contact me to contactme.md	14 months ago	The Open Archaeobotanist Blog Latest
	🗅 index.html	Update index.html	14 months ago	+ 1 release
	🗅 license.md	formatting	5 months ago	
	i≣ README.md		0	Packages
	The Open Archaec	obotanist		No packages published Publish your first package
	DOI 10.5281/zenodo.5179986			Contributors 3
Nbu2				
Nhy?				
DOI				
Versioning				
• Add space				

No collaboration?



Colin Angus @VictimOfMaths · 18 jun. Als antwoord op @VictimOfMaths

1) You write better code when you know other people might see it.

It's good to have an incentive to add more comments to your code, lay things out neatly and (generally) avoid hacky workarounds.

https://twitter.com/VictimOfMaths/status/1405809691062591490



The Turing Way

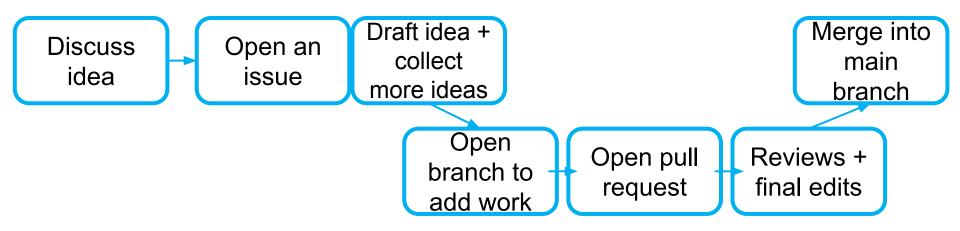
An Open Source guide on Data Science.



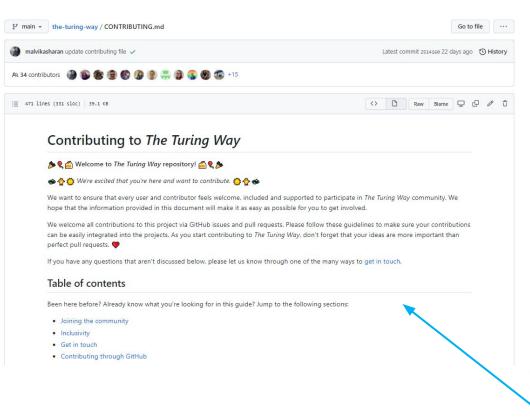
We involve and support a diverse community to collaboratively develop resources

to make data science reproducible, ethical and inclusive for everyone.

309 contributors - how? Github workflow



Share documentation



2		AP
Q		
Go to file	Add file -	Code -

2	arronlacey Merge pull request #22	34 from arfon/typos 🤐 🗸 f70488c 8 days ago	3,037 commits
	.github	[MNT] Update links and references from master to main branch	2 months ago
	README-translated	Update README-Italian.md	2 months ago
	book	Github -> GitHub	11 days ago
	communications	Update newsletter_30_Dec2021.md	14 days ago
	conferences	[MNT] Update links and references from master to main branch	2 months ago
	open-life-science-mentoring	Update README.md	22 days ago
	project_management	move old files to archive	20 days ago
	tests	remove -e	22 days ago
	workshops	Added Alden's name	2 months ago
۵	.all-contributorsrc	docs: update .all-contributorsrc	16 days ago
۵	.gitignore	Adding pycharm file to gitignore, and add structure and comments. "bo	14 months ago
۵	.zenodo.json	Update .zenodo.json	last month
٥	CITATION.cff	Update CITATION.cff	last month
D	CODE_OF_CONDUCT.md	Fix link in table of contents	10 months ago
Э	CONTRIBUTING.md	update contributing file	22 days ago

Projects 3

ᢞ main ◄

③ Security // Insights

2 75 branches 5 6 tags

https://the-turing-way.netlify.app/welcome.html

GitHub allows for testing/continuous integration to prevent errors

કુન્

https://docs.github.com/en/a ctions/automating-builds-an d-tests/about-continuous-int egration

×	Review required At least 1 approving review is required by reviewers with write access. Learn more.	Add your revie	W
 	All checks have passed 12 successful and 2 neutral checks	Hide all check	ks
~	CI / build-jb-and-check-links (ubuntu-latest, 3.7) (pull_request) Successful in 6m	Details	^
~	Check for Latin Phrases / latin-phrases (pull_request) Successful in 17s	Details	
~	Check for Lorem Ipsums / lorem-ipsums (pull_request) Successful in 18s	Details	
~	TestFileSizes / testfilesizes (pull_request) Successful in 12s	Details	
~	CI / build-jb-and-check-links (ubuntu-latest, 3.8) (pull_request) Successful in 5m	Details	
			~
×	Merging is blocked Merging can be performed automatically with 1 approving review.		

Project management (Project Board)

Sort issues, notes, to-dos in a set of columns.

Search or jump to	2 Pull requests Issues Marketplace Explore	
intermine / intermine	O Unwatch -	15 🕇 Unstar
<> Code ① Issues 217 ① Pull requests	1 Actions Projects 4 🖽 Wiki 🕡 Security 🔟 Insights 🔅 Settings	
oadmap & release planning pdated 26 days ago	Q Filter cards	+ Add cards
19 InterMine 4.1.2 (January 2019)	5 InterMine 4.2.0 (Spring 2019) + 1 InterMine 5.0.0	+ …
DataSet URLs do not appear in tables; do show in report heading #2045 opened by sammyjava	① FAIR: add profile Gene and Protein markup to the report page #1969 opened by danielabutano ··· Add gradle task to stop blue #2121 opened by danielabutano fair ··· Future InterMine release	genes
TherMine 4.1.2	Telline InterMine release	
Remove "upload to GenomeSpace" export #2107 opened by julie-sullivan	O Add "data sets" source instead of using items XML #2024 opened by julie-sullivan	
T InterMine 4.1.2	input-needed	
1 linked pull request	O Non-existent web services should	
Provide the second s	return a 404 error. #703 opened by joshkh * Future InterMine release	
enhancement s://aithub.com/intermine/intermine/issues/2045	() CDS features need phase	

Other similar platforms

Bitbucket



TASK 1: Make your first repo

Repository (Repo)

A project where all your files are, online or on your computer. Repositories on Github can:

- Be public or private
- On your own account or an organisational account
- You can give different users, different rights to editing repositories
- Can store and use any type of file not just code.
- Linked to other tools/repositories



Repository template		
	a template repository's contents.	
No template -		
Owner *	Repository name *	
🛞 EKaroune 🕶	/ my-first-frepo 🗸	
Great repository name	es ar my-first-repo is available. Need inspiration? How about fluffy-waddle?	
Description (optional)		
Public Anyone on the	e internet can see this repository. You choose who can commit.	
Anyone on the	e internet can see this repository. You choose who can commit. ho can see and commit to this repository.	
Anyone on the Private You choose wi	ho can see and commit to this repository.	
Anyone on the Private You choose within the state of th	ho can see and commit to this repository. Pry with: importing an existing repository.	
Anyone on the Private You choose within Initialize this repositor Skip this step if you're Add a README fil	ho can see and commit to this repository. Pry with: importing an existing repository.	
Anyone on the Private You choose with Initialize this repositor Skip this step if you'ree Add a README fill This is where you can Add .gitignore	ho can see and commit to this repository. Pry with: importing an existing repository. e	
Anyone on the Private You choose with Initialize this repositor Skip this step if you'ree Add a README fill This is where you can Add .gitignore	ho can see and commit to this repository. by with: importing an existing repository. e write a long description for your project. Learn more.	

- 1. Click on green new button
- 2. You will see the name of your account and you need to fill in
 - a repository name next to it.
- 3. Also, leave the box ticked for "public" (so your repository is open to all) and then tick the
 - box to create a "README file".
- Then click the green create repository button at the bottom.

Now make your own first repository!

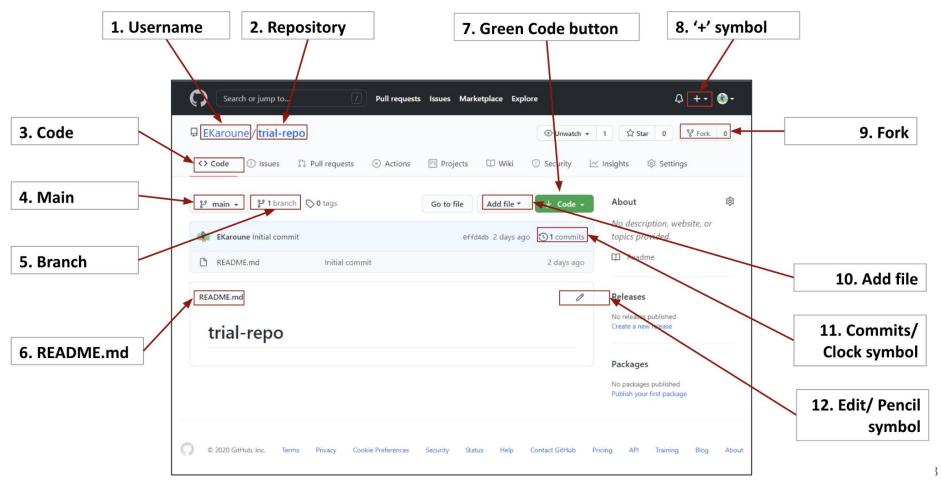
Create repository

New



https://www.freeiconspng.com/img/31116

Exploring the repository



GitHub & Markdown

How do you edit and format files on Github?

Using Markdown (.md)

- It's a human readable script that can be use to add formatting elements to plaintext text documents.
- The syntax makes it render in a way that presents a nicely formatted document on Github or webpages.

Markdown (.md) for formatting

Markdown is a simple text "markup" language made for quickly writing formatted text

Great for blogs, documentation, and even writing papers.

Untitled - Edited ~	0 Words



GitHub automatically renders anything written in Markdown. This can be specific files, pull requests, issues or comments.

Some useful resources:

- <u>https://github.com/adam-p/markdown-here/wiki/Markdown-Cheatsheet</u>
- https://www.webpagefx.com/tools/emoji-cheat-sheet
- <u>https://github.com/EstherPlomp/20211014-SeaChanges/blob/main/REA</u>
 <u>DME.md</u>

Task 2: Use Markdown to format README.md file

You have already created a README.md file

This is the Landing page for your repository

You can:

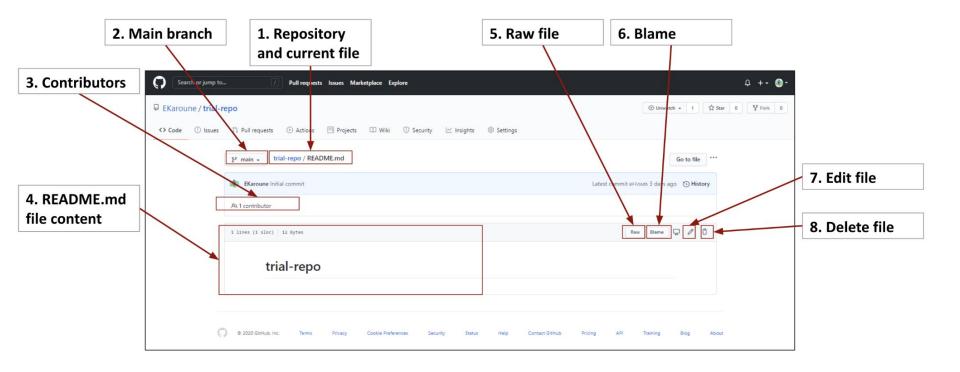
- Add information about your project
- List tasks of varying expertise clearly
- Add names/ids of your collaborators contact information
- Invite others with specific skills

Any file with .md is a markdown file

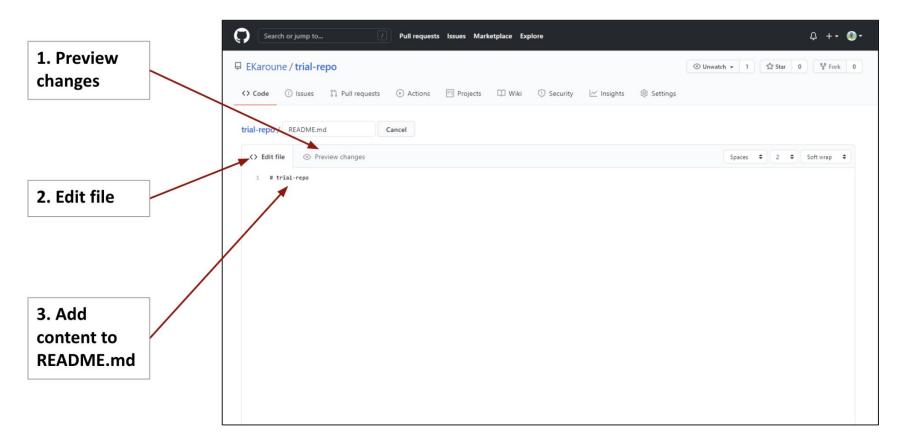
You need to use Markdown to edit this file.



From your repo landing page either click on the pencil symbol or click on the README.md file and then the pencil symbol.



README.md file in edit mode



Adding a template

my-first-repo /	README.md	in main			Cancel char	nges
<> Edit file	Preview		Spaces \$	2 💠	Soft wrap	¢
1 # my-fi	rst-repo					
2						- 1
3 ## This	is my first repo					- 1
4						- 1
5 ## Welc	ome!					- 1
6						- 1
7						- 1
	<u>is this project about</u> are we?](#who-are-we)	and why is it important?](#what-is-this-project-about-and-why-is-it-important)				- 1
	do we need?](#what-do-	ue need)				- 1
		#how-can-you-get-involved)				- 1
	in touch](#get-in-touch					- 1
	out more](#find-out-mo					- 1
	<pre>sary](#glossary)</pre>					- 1
15						- 1
16 ## What	is this project about	and why is it important?				- 1
17						- 1
18						- 1
19 ### The	problem					- 1
20						- 1
21						- 1
	solution					- 1
23						- 1
25 ## Who i	ana wa)					- 1
26	are wer					- 1
27						- 1
	does this project need	2				- 1
29						
30						
31 ## How	can you get involved?					
32						
33 ## Get :	in touch					
34						
35						,
Attach files by dr	agging & dropping, selec	ing or pasting them.				

Adding a template - what it looks like rendered.

⊙ Preview
my-first-repo
This is my first repo
Welcome!
What is this project about and why is it important?
Who are we?
What do we need?
How can you get involved?
Get in touch
Find out more
Glossary
What is this project about and why is it important?
The problem
The solution
Who are we?
What does this project need?
How can you get involved?
Get in touch
Find out more
Thank you

Once you have added more detail or a template to your README.file, you need to save the changes.

In Github, this is done by using the green *commit changes* button.

Always add a commit changes message.

Commit changes

Cancel

This allows you to track the changes made easily.

d an optional extended description	
Commit directly to the main branch.	

Task 2: Use Markdown to format README.md file

Readme examples

- <u>https://alexwlchan.net/2021/10/read</u> <u>mes-for-open-science/</u> (multiple examples and explanation)
- <u>https://github.com/EstherPlomp/Fig</u> ures-Nd-data
- Project readme template

EKaroune create license		b592e2d now 36 commits	
	create license	now	
README.md	deleting template	3 minutes ago	
🗅 template-readme.md	creating readme template	1 minute ago	
my-first-repo		0	Click here to edit



Task 3: Adding a license

All Github repositories need a license.

- Licenses on Github are for software/code
- You can add any license you want to your repo

Software/code - MIT license

Data - CC0 or CC-BY 4.0

Project repositories and documentation - CC-BY 4.0 and also add MIT if you have code

Links for licenses:

- <u>Creative Commons</u>
- MIT License



Task 3: Adding a license

Explore the licenses and put one on your repository

Software/code - MIT license

Data - CC0 or CC-BY 4.0

Project repositories and documentation - CC-BY 4.0 and also add MIT if you have code

Links for licenses:

- Creative Commons
- MIT License

CC-BY license Github file to <u>copy</u> and <u>paste</u>

Github license badges to add to README.md file https://gist.github.com/lukas-h/2a 5d00690736b4c3a7ba



Final tips

Adding a folder and new file:

- Click add file, then create new file.
- Enter the folder name and then / and then name of file.
- You can create a README.md file for every folder.

You can also upload files clicking add file, upload files.

- Then drag and drop the files you want to upload.
- This can be done in the landing page or in folders.



Any questions?

Can you?

- 1. Give an example of a use of Github that you learnt about in this session?
- 2. Describe how to start editing a file in Github?
- 3. What are the two files you need to create when making a new repository?
- 4. What is markdown script?

Session 2 - Collaboration with Github

- To know what version control is.
- To start using a collaborative workflow in Github.

