Why Open Science

Science is not working as it should be

- **Slow, wasteful, locked away**
- **Ruled by commercial interests**
- **Reproducibility crises**
- **Questionable research practices**
- **Closed science means people suffer**

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We need science if we are going to help quickly and sustainably solve these

Our vision of the future

To help make ‘Open’ the default setting for all global research.

We want to help create a welcoming and supporting community, with good tools, teachers, and role-models, and built upon a solid values-based foundation of freedom and equitable access to research.

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The way we do research has changed for good

We now have new expectations

Transparency

Not secrecy

Collaborative

Not solo

Continuous

Not discretised

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We should be training ourselves

- Sustained community engagement across disciplines
- Being active both politically and at a community level
- Rethinking our mindset
- Changing the incentive system

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How do we get to where we want?

Imagine a future defined by the values of Open Science:

- **Freely available public good**
- **Rigorous and reproducible**
- **Open to ALL**
- **Isn't that just GOOD science?**

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The best researchers have already reinvented themselves into Openness

We need everyone to be collaborating together if we are going to help solve the challenges humanity faces.

#OpenScience

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How do we fit in?

- **Community**
- **Common values**
- **Collaboration not competition**

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Introducing the Open Science MOOC

A **peer-to-peer** value-based **community** that works towards better **science for society**

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What do researchers care about?

- **Saving time and effort**
- **Problem solving**
- **Advancing research**

We give them the **knowledge** and **skills** to do this

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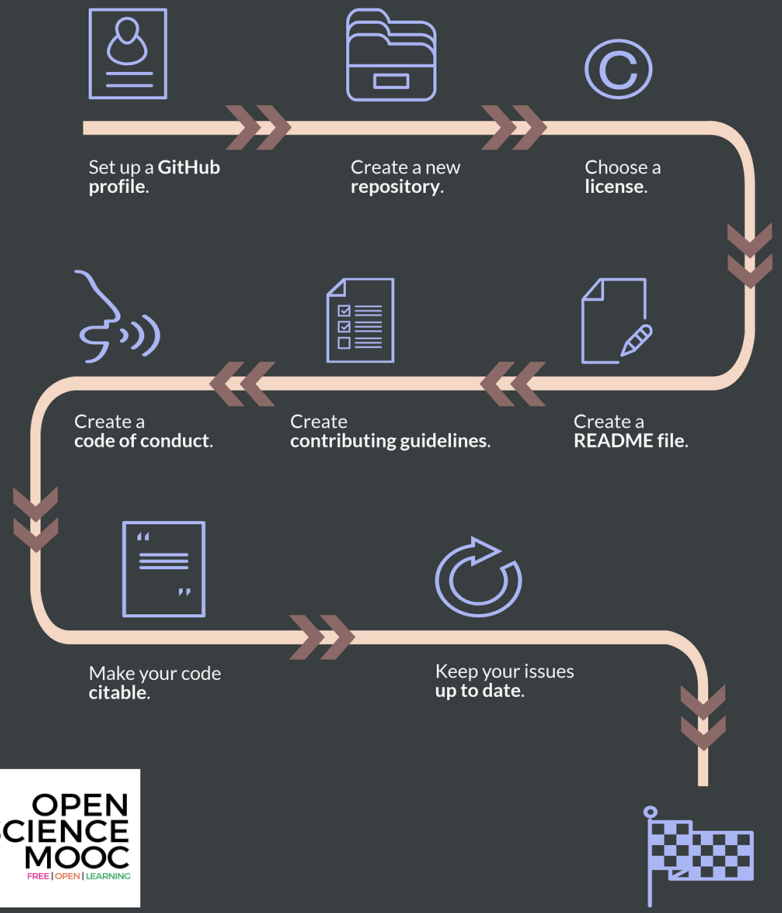
Task 1

Getting started with GitHub



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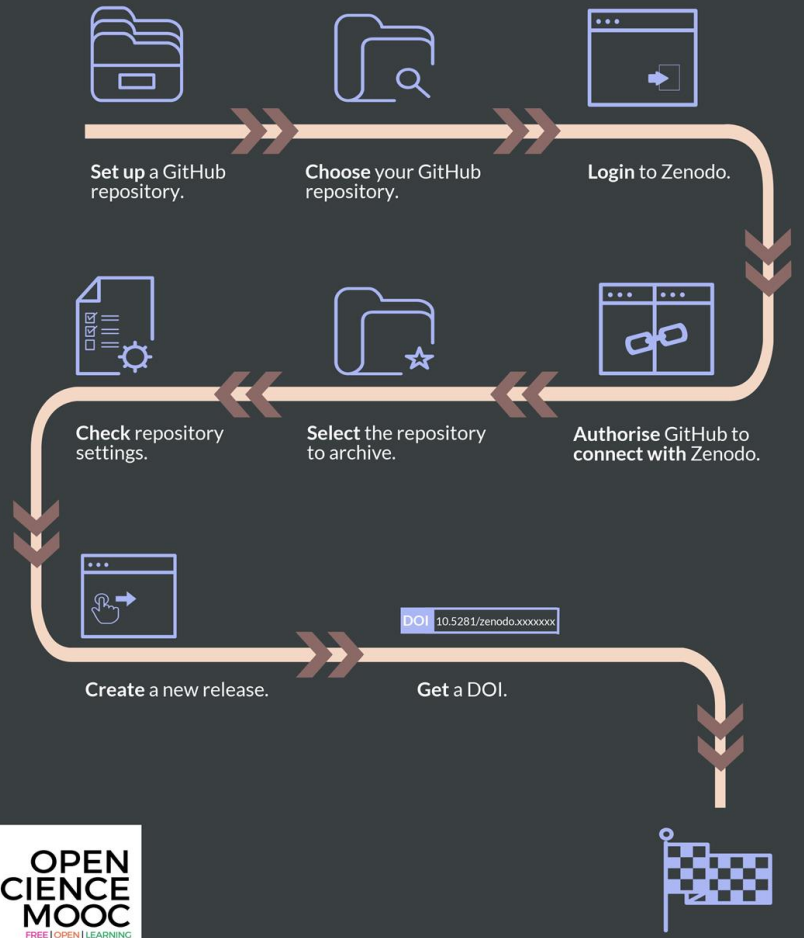
Task 2

Making your code citable with Zenodo.



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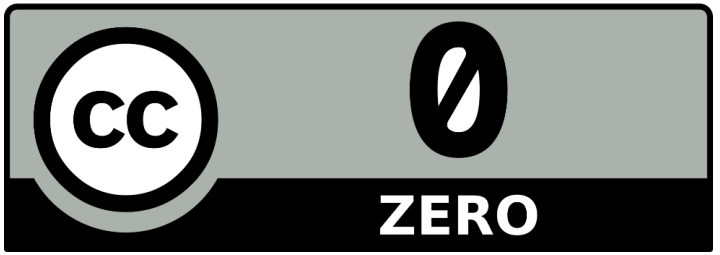
Open for re-use



STATUS:

LIVE! This module is now online and ready to go via Eliademy.

The second release for this module is now also ready, and has been published on Zenodo:

Version 2: DOI 10.5281/zenodo.1434288

Version 1: DOI 10.5281/zenodo.1325081

To cite this work, please use the following reference:

Tennant, J. et al. (23/09/2018) Open Science MOOC: Module 5, Open Research Software and Open Source (Version 2.0) Zenodo. http://doi.org/10.5281/zenodo.1434288

In markdown format

- MAIN CONTENT - The main content for this Module.
- TASK 1 - How to set up your first repository on GitHub.
- TASK 2 - How to make your code citable using GitHub and Zenodo.
- TASK 3 - How to integrate Git with RStudio.

In iPython notebook format

Note: These are best viewed in Juypter for full functionality, as opposed to the GitHub viewer.

- MAIN CONTENT (click here to view)
- TASK 1 (click here to view)
- TASK 2 (click here to view)
- TASK 3 (click here to view)

In PDF format

- MAIN CONTENT
- TASK 1
- TASK 2
- TASK 3

In HTML format

- MAIN CONTENT
- TASK 1
- TASK 2

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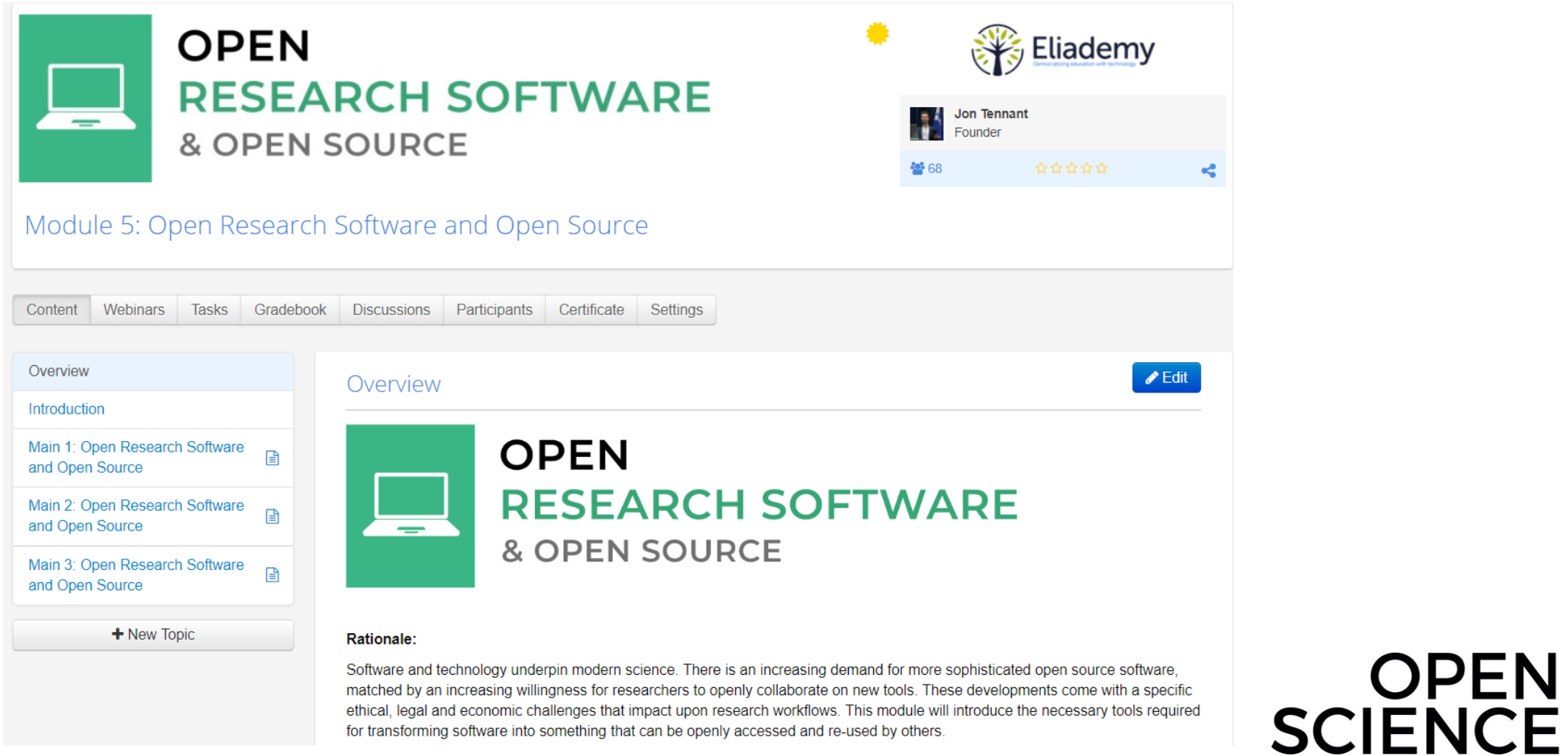

https://eliademy.com/catalog/oer/module-5-open-research-software-and-open-source.html

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A fully interactive learning style

This allows learners to actually edit the MOOC content for this module. **Nice**.

Learning is based on **participation** and **collaboration**.

OPTIONAL ADVANCED/AWESOME STEP

Alright, so you just pushed some content to your first repo, awesome! Now let's put it into practice for a real project. Like, the one you are participating in right now. Let's try this out:

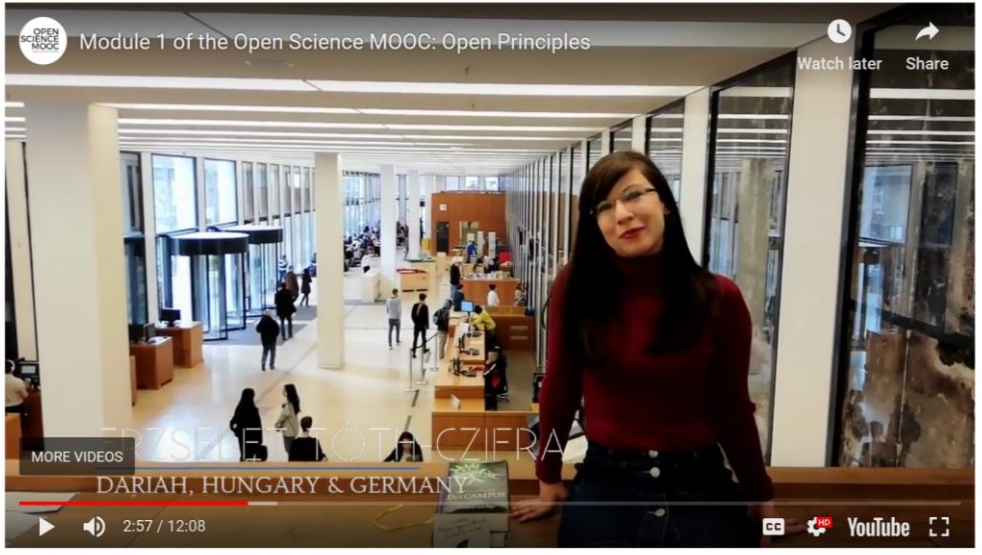
1. Go to the repositors for this project on GitHub
2. Fork the repository to your own GitHub account. The URL for this should be: `https://github.com/OpenScienceMOOC/Module-5-Open-Research-Software-and-Open-Source.git`
3. Head into RStudio, go to **File** > **New Project**, choose *Version Control*, select *Git*, and then paste the forkerd repository URL found in your copy of the repository. You now have your own versioned copy of this whole module. Neat. Save this somewhere on your local machine.
4. Now, you need to tell Git that a different version of this project exists. Open up the *Shell*, and enter the command: `git remote add upstream https://github.com/OpenScienceMOOC/Module-5-Open-Research-Software-and-Open-Source`
5. What you just did was name the original branch here `upstream`, just to keep things simple for now. Now, create a new **branch** to document your changes to this independent of the main branch. Enter the command: `git checkout -b proposed-changes master`
6. You just created a new branch called `proposed-changes` where you can now edit all of the content and files to your heart's delight. Hopefully, the structure of this project is simple enough for you to navigate around. All of the raw files for the MOOC can be found in the `content_development` folder, and this is `Task_3.md`.
7. If you scroll to the bottom of `Task_3.md`, you should see a place where you can edit in your name and affiliation. Add these in, and then go through the commit procedure detailed above. If you see anything else that needs editing too, feel free to add them in too!

Way more than just an online course

We want to build more than a tool, a platform or a service.

We are committed to build an open and inclusive community!

Go check out our Module 1 on Open Principles, starring real #OpenScience heroes



This is **Module 1** of the **Open Science MOOC**. This course is totally **SELF-PACED**, meaning it can be completed whenever you want and in your own time.

Rationale: To innovate in a field frequently implies moving against prevailing trends and cultural inertia. Open Science is no

https://eliademy.com/catalog/oer/module-1-open-principles.html

Modular learning

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Designed by: Mike Morrison

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Open for re-use

Open Research Software and Open Source

Open Research Software and Open Source

STATUS: The first release for this module is now ready, and has been published on Zenodo:

DOI 10.5281/zenodo.1325081

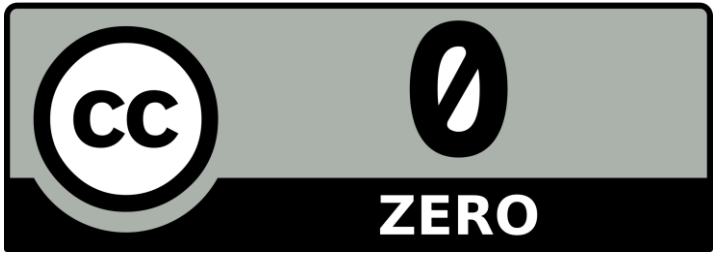
To cite this work, please use the following:

Tennant, J. et al. (01/08/2018) Open Science MOOC: Module 5, Open Research Software and Open Source (Version 1.0) Zenodo. https://doi.org/10.5281/zenodo.1325081

Rationale Software and technology underpin modern science. There is an increasing demand for more sophisticated open source software, matched by an increasing willingr tools. These developments come with a specific ethical, legal and economic challenges that impact upon research workflows. This module will introduce the necessary tools r that can be openly accessed and re-used by others.

Learning outcomes

- The researcher will be able to define the characteristics of open source research software, and the ethical, legal, economic and research impact arguments for and agair
- Based on community standards, researchers will be able to describe the quality requirements of sharing and re-using open code.
- The researcher will be able to use a range of research tools that utilise open source software.
- Individual researchers will be able to transform code designed for their personal use into code that is accessible and re-usable by others.



We are not alone

Some of our Production Team

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Berkeley, CA, USA

Bruce Caron

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Webdev Wizard

Canada

Dr. Gareth O'Neill

Language Lubber

Amsterdam

Jo Havemann

Research in Africa Highlighter

Germany

Dr. Kevin M Moerman

Open Sourceror

USA

We are guided by passion

Steering committee

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Steering Committee
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Germany

Paola Masuzzo
Steering Committee, Open Source Batman
Italy

Ricardo Hartley
Steering Committee
Chile

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Threads

Starred
events
funding
general
steering

Channels
hardware
increasing_rep
introductions
module1_principles
module3_repro-res
module4_opendata
module5_opensource
module6_openaccess
module9_oer
monthly_sprint
moocdularity
opensciencesacademy
platform
promotion
qanda
random
resources
translation_de
translation_es
translation_fr
translation_it
translation_pl
translation_pt-br
translation_ru
translation_zh

#general
697 | 3 | https://eliademy.com/catalog/oer/module-5-open-research-software-and-open-source.html

Search

Today

3 1

1 reply Today at 3:34 PM

Jon Tennant 3:04 PM
OK, folks. This is awesome. If you type / jitsi in here now (without the space), and type in a username, it will generate a live video/audio meeting room that anyone can use!

/jitsi opensciencemooc

Jitsi Meet APP 3:04 PM
Meeting started on https://meet.jit.si

Join

Samir Hachani 3:04 PM
Ya I know bear and not bare !!! Let's put it on Ramadan 😎....mail : sam_hac1@yahoo.fr

Jon Tennant 3:04 PM
Pretty cool eh! 🙂

Aha, already got you, thanks @Samir Hachani !! 🙂

Natalka 4:30 PM
joined #general.

Jon Tennant 6:42 PM
This should be of interest to many here, HT @naomipenfold https://twitter.com/npscience/status/1136268140785147904?s=03

> **Naomi Penfold** @npscience
> Are you male, want to be an ally in diversity and inclusion issues in tech but don't know where to start & scared of messing up?
> @mozilla offer you a 1hr closed discussion to help you start this Friday 5-6pm UK
> https://events.mozilla.org/dearmeninopensourcethiscallisf
>
> Take this opportunity, RSVP now
> #opensource
> Twitter | Today at 3:46 PM

Message #general

https://osmooc.herokuapp.com/

Skeptical? **You should be**.

But it’s not as new as you think.

Science was founded on openness.

We closed it down.

It’s time to open it up again.

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Status

- **In development**
- **700** Slack community members
- **6500** Twitter followers
- **45** strategic partnerships
- **650** people enrolled in Module 5 and **150** in Module 1
- Agile development so people are already using content
- Iterative feedback is our design

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What people say of the MOOC

Danny Kingsley
@dannykay68

VIDEO - introductory video that now online for the Open Science MOOC: youtube.com/watch?v=1fwGli... It is great, has different people talking about real experiences they have had with Open Source software. Engaging and interesting.

Module 5 of the Open Science MOOC: An introduction to Open...
Learn more about the Open Science MOOC and join the community here: https://eliademy.com/catalog/oer/module-5-...
youtube.com

Hollie Marshall
@MooHoll

Well worth a look for anyone wanting to share their code (which hopefully is everyone in science now-a-days) but not sure where to start. Easy to follow and has genuinely changed my workflow! #openscience #opencode #genetics #epigenetics #evolution #phdchat #phdlife #bumblebees

Julia Eberlen
@JuliaEberlen

This looks absolutely brilliant and 100% like what I *wish* had existed in the beginning of my PhD: Learn how to actually do open science!

Open Science MOOC @OpenScienceMOOC · Dec 10, 2018
Why not get your week off to a great start by enrolling in our free online training course?
...

OPEN
RESEARCH SOFTWARE
& OPEN SOURCE

Lisa Matthias
@l_matthia

Thanks to the @OpenScienceMOOC, I'm a little less clueless about GitHub and the publisher OA portfolios got a DOI now too! github.com/lmatthia/publi... #openscience

How do you want to shape your identity as a scientist?

Researchers can be world-changing heroes

We will give them the power to achieve that

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Help science work for society again

People not profits!

Students, teachers, journalists, bloggers, startups, entrepreneurs, policymakers, citizen scientists, NGOs, charities, health practitioners.

We are here for you.

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Melanie Imming, & Jon Tennant. (2018, June 8). Sticker open science: just science done right. Zenodo. https://zenodo.org/record/1285575

Thanks!

- **GitHub**: https://github.com/OpenScienceMOOC
- **Website**: https://opensciencemooc.eu
- **Twitter**: @OpenScienceMOOC
- **Email**: info@opensciencemooc.eu