Share and Preserve Your Code

Publishing your code offers many benefits. In addition to **preserving** your code and making it **accessible** to others, publishing also ensures others can **cite** it, **reproduce** it, and helps you contribute to the **open science** movement.

This guide will show you how to use <u>Github</u> to publish your code and <u>Zenodo</u> to archive it and create a citable DOI for your software.

First: Set Up a GitHub Repository

A GitHub repository can house anything relevant to your project (including code, API documentation, data sets, spreadsheets, etc.) It will have a unique URL you can share with others.

- 1. Log in to <u>GitHub</u>.
- 2. Click the green "Create Repository" button



- 3. Choose a descriptive name and write a brief description for your repository.
- 4. Make the repository public (this allows you to archive it).
- 5. Add a README file now or add it later (just make sure you include one!)
- 6. Choose which files not to track (if applicable).
- 7. <u>Choose a license</u> for your repository.
- 8. Create your repository.

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oreau repository names are sh	nort and memorable. Need inspiration? How	w about glowing-telegram?	repository
Description (optional)	•		
Public Anyone on the internet of	an see this repository. You choose who can comm	Make it public : it. can be archive	and the second se
C A Private You choose who can see	and commit to this repository.		
Initialize this repository with:			
Skip this step if you're importi	ing an existing repository.	Make yo	ur
Add a README file This is where you can write a lo	ong description for your project. Learn more.	selections	2223
		DEADME 6	lasta
Add aitignoro		README, fi	les to
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Choose which files not to track from gitignore template: None • Choose a license A license tells others what they can		ignore, a	nd

Next: Archive Your Repository in Zenodo

Zenodo is an open repository that preserves your code and will archive your GitHub repository each time you create a new release. Each submission in Zenodo will be assigned a DOI (digital object identifier), meaning your code can be cited by others.

Archiving in Zenodo requires two steps: linking your GitHub repository with Zenodo and then creating and publishing a release of your repository.

Link GitHub with Zenodo:

1. Log in to Zenodo with your GitHub account. (Zenodo may prompt you to authorize GitHub).

	Log in to account	/
	O Log in with GitHub	
	O Log in with ORCID	
	- OR -	
Email Address		
Password		۵
	+D Log In	
	New to Zenodo? Sign Up	
	New to Zenodo? Sign Up Privacy notice	

2. From the drop-down menu next to your email address, select GitHub.

zenodo 🛛	Search Q Upload Communities	≜ @uiowa.edu →
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Spencer Scott		Need help? Fiew Contact us Zenodo prioritizes all requested related to the COVID-19 outbreak. We can help with:

3. You will see your GitHub repositories. If needed, choose "Sync Now" to update.

ome / Account / GitHub	O GitHub Repositories		(updated now) Sync now.
Profile		O Get started	
Change password			
J Security	1 Flip the switch	2 Create a release	3 Get the badge
b Linked accounts	Select the repository you want to preserve, and toggle the switch below to	Go to GitHub and create a release. Zenodo will automatically download a	After your first release, a DOI badge tha you can include in GitHub README will
J Applications	turn on automatic preservation of your software.	zip-ball of each new release and register a DOI.	appear next to your repository below.
Shared links			DOI 10.5281/zenodo.8475
) GitHub	ON		(example)
	Repositories		
1	If your organization's repositories do not show up i are not supported.	n the list, please ensure you have enabled third-party ac	ccess to the Zenodo application. Private repositori

Archive Your Repository

1. Toggle the "on" button next to the repository you want to archive.



- 2. Click on the name of the repository.
- 3. Choose the "Create Release" button. This redirects you back to GitHub's repository page.

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Home / Account / GitHub / Settings		/RDS_sample	ON
Profile	GitHub / Releases		O Create release
4 Change password			
Security		Get started!	
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- 4. Complete the fields (title, description, version number.) If this is your first release, use version number v1.0.0.
- 5. Click "Publish Release" at the bottom of the page.

Releases Tags	
Choose a tag 👻 🐉 Target: main 👻	
Choose an existing tag, or create a new tag when you publish this release. Title your release	
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Provide a brief description	
\downarrow Attach binaries by dropping them here or selecting them.	
This is a pre-release We'll point out that this release is identified as non-production ready. Publish release Save draft	

Add Your Repository to the University of Iowa Community on Zenodo

Uploading your repository to the Ulowa community will allow other Ulowa researchers to easily find your code (and for you to find theirs!)

1. From your list of Zenodo repositories, click the DOI link for the repo you want to add.

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GitHub / Releases	O Create release
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IIIII DOI: 10.5281/zenodo.7094174	13 days ago
O Sample Release	

2. Choose "edit."

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September 19, 2022	Software Open Access	C	Edit
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This is a sample to show how to link GitHub and Zenodo.		6	0
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3. Search for and choose the University of Iowa community.

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structions: (i) Upload minimum one file or fill in requ	ired fields (marked with a red star). (ii) Press "Save" to save your upload for editing later. (iii) When re	sady, press "Publish" to finalize and make your upload public.
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University of Iowa	choose the Ulowa community	۹
University of Iowa A Zenodo community for Ur	iversity of lowa research data and related materials such as code/scripts.	
Zenodo		

4. Save

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Zenode	× University of Iowa		

What Now?

If you return to Zenodo and access GitHub through Zenodo, you should see your repository listed under "Enabled Repositories" with a blue DOI button next to it. (If it's not there, choose "Sync Now").

Now you can:

- 1. Edit the archive and/or publish a new version.
- 2. Add a description of the repository and write the metadata.
- 3. Click the blue DOI button to copy the badge in Markdown and add it to your README in GitHub.

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() hancyne /RDS_sar	ipie	
DOI 10.5281/zenodo.7094174		
	Click the badge	
Repositories		

DOI Badge	
his badge points to the latest released version of your repository. If you want a DOI badge for a specific elease, please follow the DOI link for one of the specific releases and grab badge from the archived record.	
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