

# WKTAF 13-14 September 2022

Transparent Assessment Framework for Stock Assessment

## Introduction to Git and GitHub

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Colin Millar



Science for sustainable seas

# Introduction to Git and GitHub

- Git
- Repositories and branches
- GitHub
- Git with R Studio
- ICES on GitHub



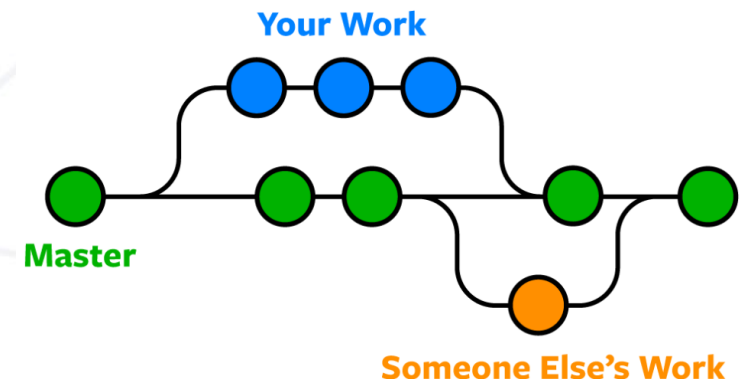
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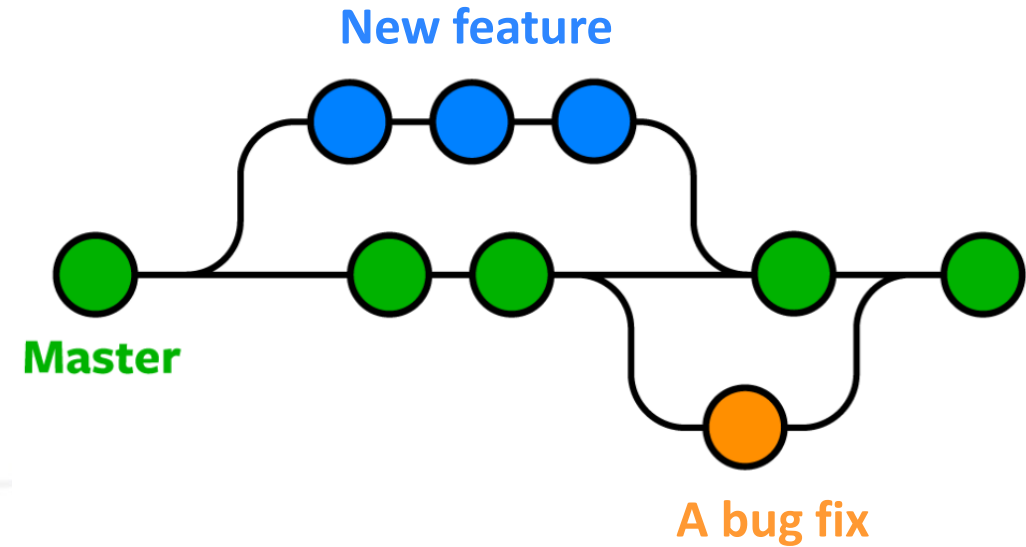
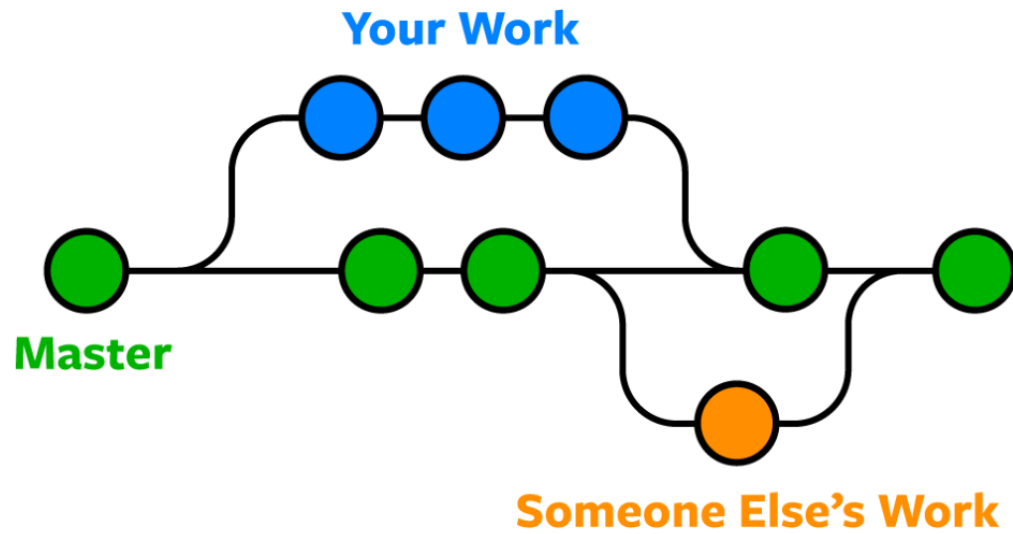
# What is Git?



- Git is a widely used **Version Control System**, which lets you track changes you make to your files over time.
- Git is accessible via a command line (terminal), or a desktop app that has a GUI (graphical user interface)
- Gives a team the ability to work on the same code base (master branch) through a well-documented approach (development branches).



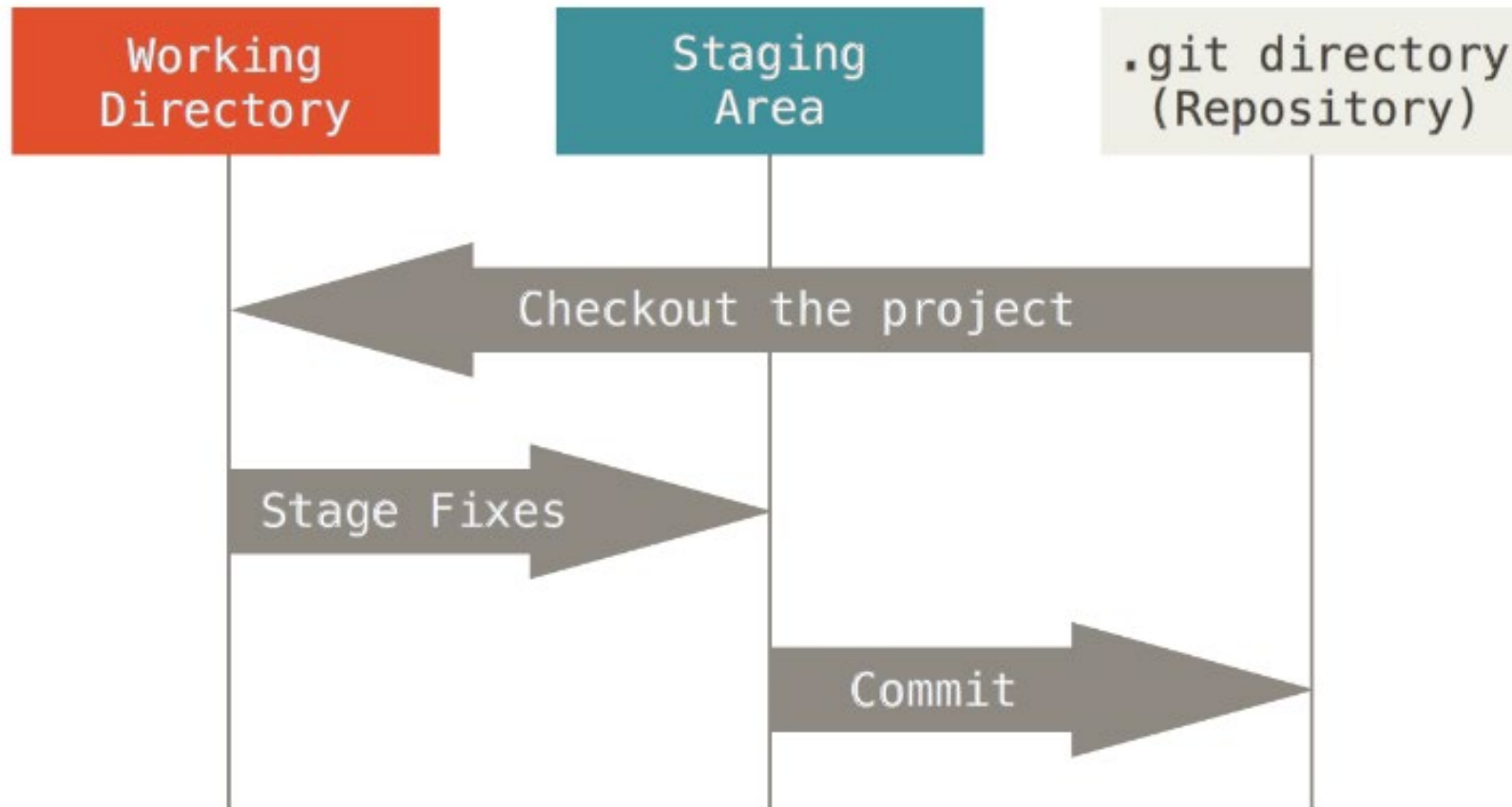
# Branching your work



# Repositories (Repo's)

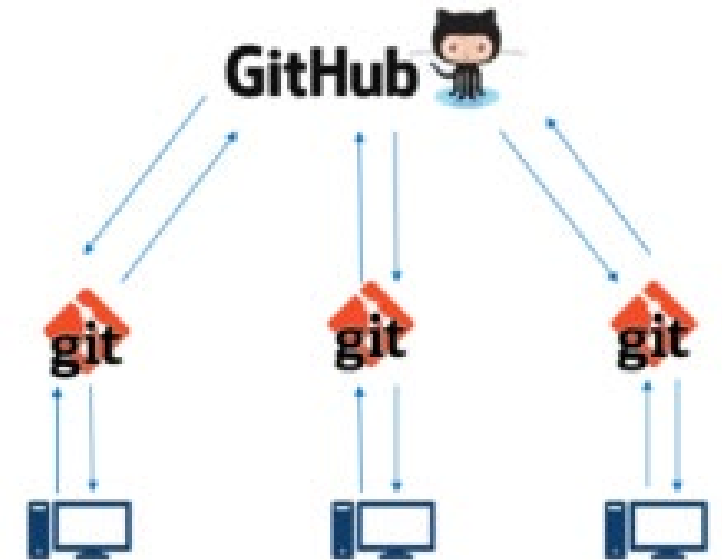
- A repository is where your source code can be stored, contributed to, and managed over time.
- A repository I stored locally or online (e.g. GitHub)
- A single repository is usually used for a single project (Repository = Project).

# The Git workflow



# What is GitHub?

- GitHub is an online hosting service for Git repositories.
- GitHub is a file or code-sharing service
- Provides a visual interface to help track or manage your **version-controlled** projects locally through Git.
- It is a tool used by both local and distributed teams collaborating on projects.



# Setup your own repo from GitHub



github.com/cekv?tab=repositories

Search or jump to... Pull requests Issues Marketplace Explore

Overview Repositories 9 Projects Packages Stars

Find a repository... Type Language Sort **New**

**Taf-tutorial** Public  
This and that TAF  
R MIT License Updated 15 hours ago

**RLearning** Public  
R course material  
R Updated on Jun 13

**Work\_stuff** Public  
Place to keep small bits and pieces for work  
Updated on Jun 13

**GitHub-tutorial** Public  
Updated on Jun 13

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Edit profile  
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ICES  
www.ices.dk  
Achievements



# Setup your own repo from GitHub

## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

### Repository template

Start your repository with a template repository's contents.

No template ▾

Owner \*

cekv ▾

Repository name \*

GitHub-tutorial ✓

Great repository names are short and memorable. Need inspiration? How about [special-enigma?](#)

Description (optional)

☒ Public

Anyone on the internet can see this repository. You choose who can commit.

☐ Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☒ Add a README file

This is where you can write a long description for your project. [Learn more.](#)

Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: None ▾

Choose a license

A license tells others what they can and can't do with your code. [Learn more.](#)

License: None ▾

This will set `main` as the default branch. Change the default name in your [settings](#).

**i** You are creating a public repository in your personal account.

Create repository

# Setup your own repo from GitHub



cekv / GitHub-tutorial Public

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags

Go to file Add file Code

**About**

No description, website, or topics provided.

Readme 0 stars 1 watching 0 forks

**Releases**

No releases published  
[Create a new release](#)

**Packages**

No packages published  
[Publish your first package](#)

cekv Initial commit 434c465 1 minute ago 1 commit

README.md Initial commit 1 minute ago

README.md

## GitHub-tutorial

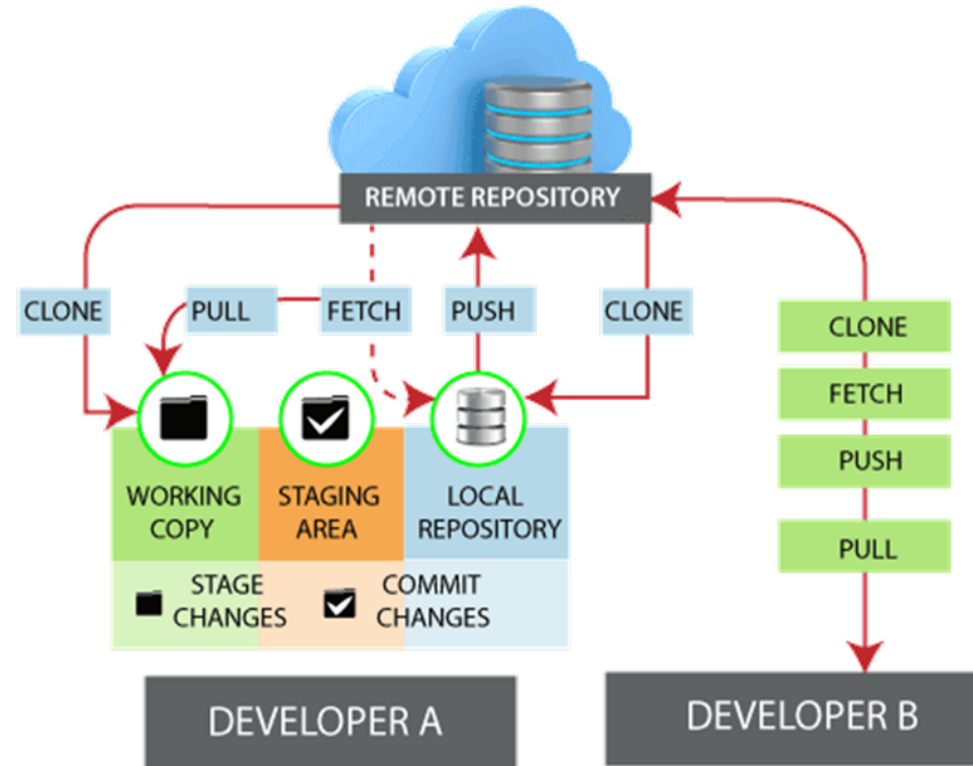
# Git with R studio



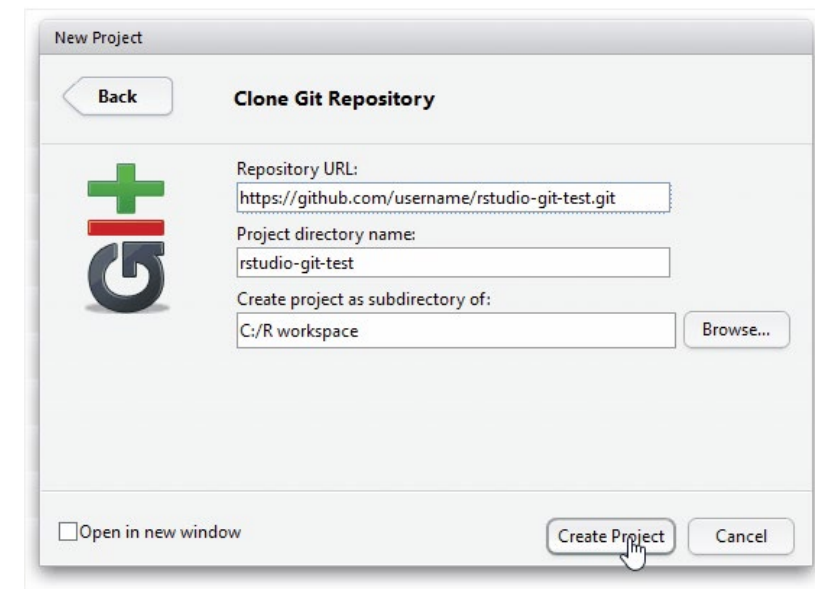
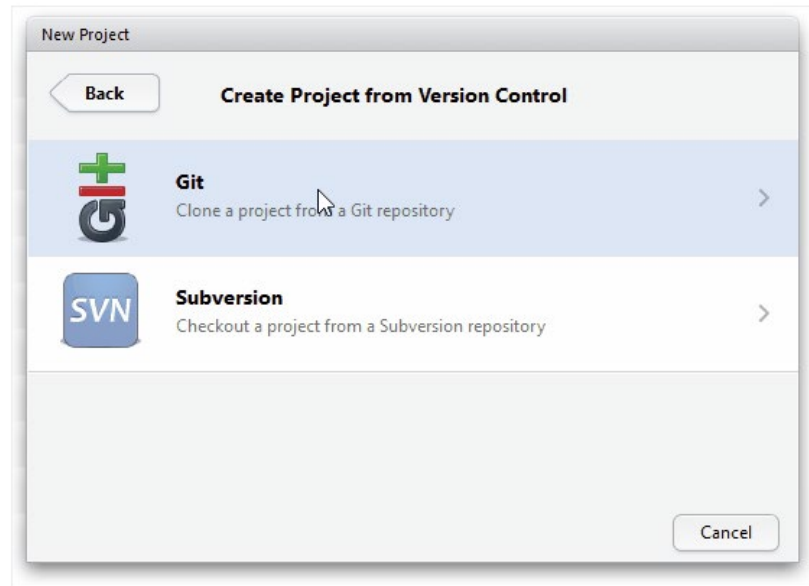
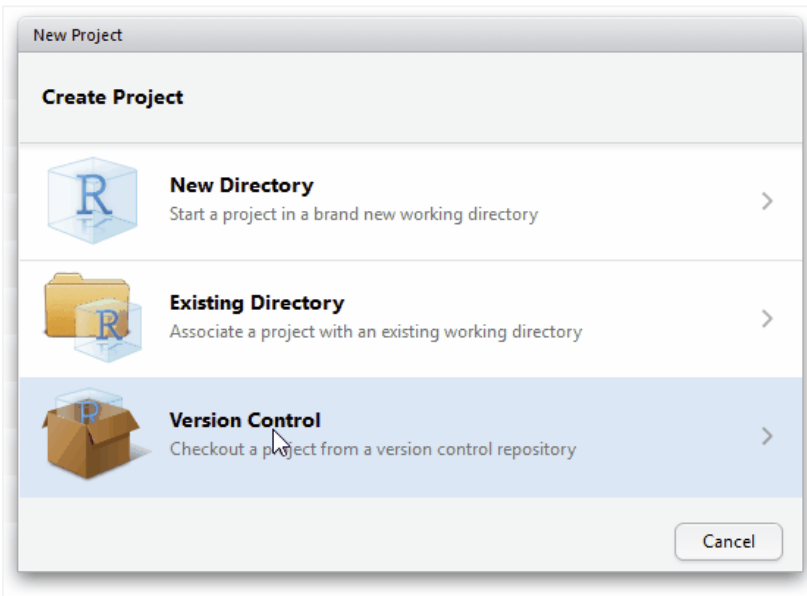
- A GitHub account.
- Git installed on your computer.
- RStudio configured to use git (<https://support.rstudio.com/hc/en-us/articles/200532077-Version-Control-with-Git-and-SVN>).
- Either clone an existing repo or create a Git repo from work you have already started in R.
- Using directories already under version control (local)
- Creating a new project based on a remote Git repository (e.g. From GitHub)

# Git with R studio

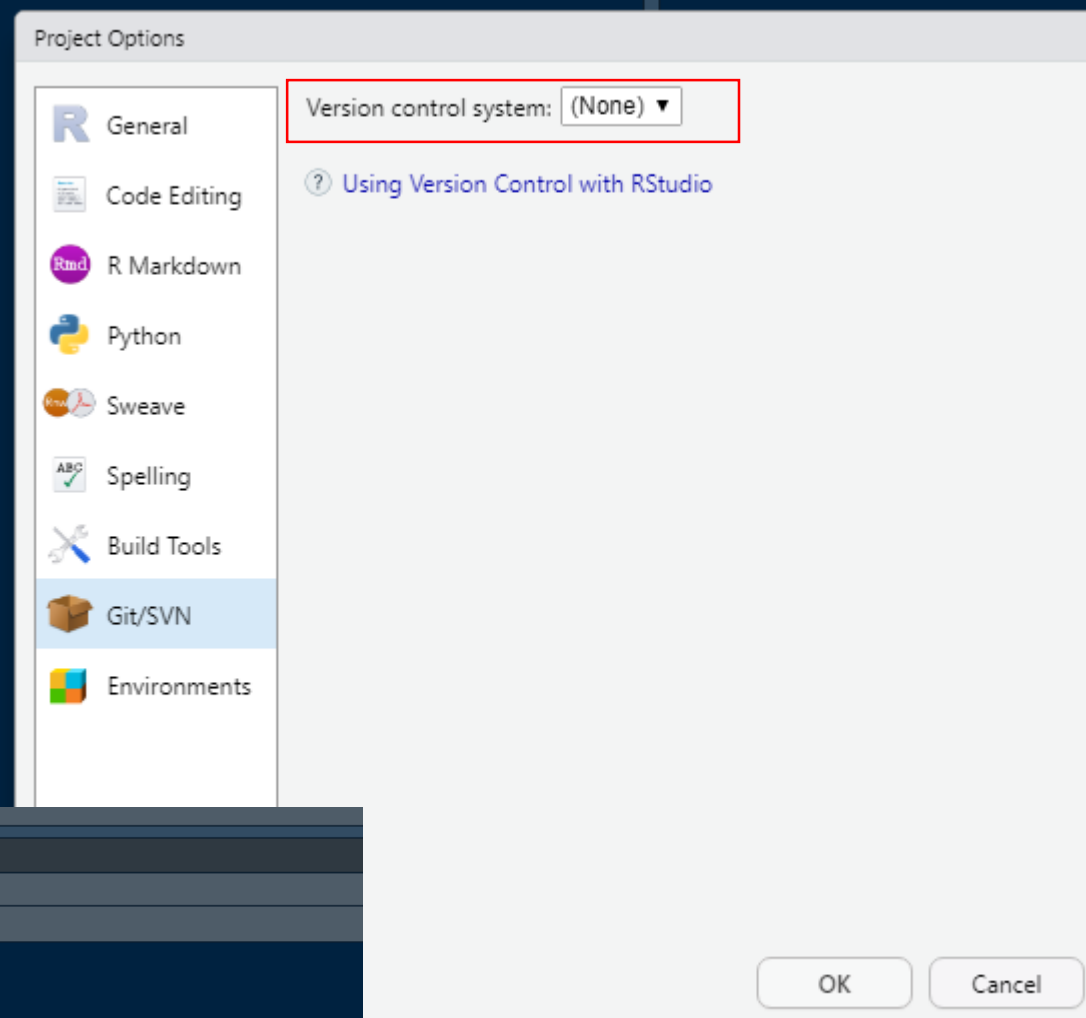
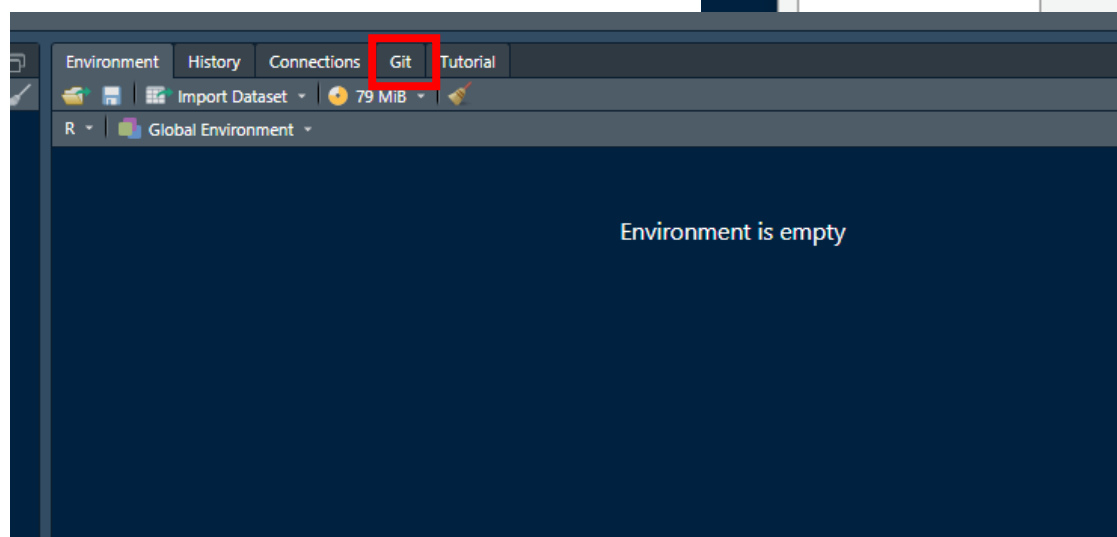
- Clone (download repo)
- Fetch (get changes)
- Push (upload changes)
- Pull (merging of your local and the remote repository)



# Clone a Git version control project in R Studio



Tools > Version control > Git



## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere?

[Import a repository.](#)


### Repository template

Start your repository with a template repository's contents.

No template ▾

Owner \*

Repository name \*

 cekv ▾

/ Work stuff ✓

Great repository name! Your new repository will be created as Work-stuff. ? How about laughing-broccoli?

Description (optional)

Small things i do for work side projects

☒  Public

Anyone on the internet can see this repository. You choose who can commit.

☐  Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☒ Add a README file

This is where you can write a long description for your project. [Learn more.](#)

Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)


.gitignore template: None ▾

Choose a license

A license tells others what they can and can't do with your code. [Learn more.](#)

License: GNU Affero General ... ▾

This will set  main as the default branch. Change the default name in your [settings](#).

 You are creating a public repository in your personal account.

Create repository



## Quick setup — if you've done this kind of thing before

[Set up in Desktop](#)

or

[HTTPS](#)[SSH](#)

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

### ...or create a new repository on the command line

```
echo "# Work-stuff" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin git@github.com:cekv/Work-stuff.git
git push -u origin main
```



### ...or push an existing repository from the command line

```
git remote add origin git@github.com:cekv/Work-stuff.git
git branch -M main
git push -u origin main
```



### ...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

[Import code](#)

**ProTip!** Use the URL for this page when adding GitHub as a remote.



```
110
93:1 (Top Level) R Script

Console Terminal x Jobs x
Terminal 1 MINGW64:/d/Cecilia/Documents/ceciliak/Work stuff
ceciliak@ICES371 MINGW64 /d/Cecilia/Documents/ceciliak/Work stuff (main)
$ git remote add origin https://github.com/cekv/Work_stuff.git

ceciliak@ICES371 MINGW64 /d/Cecilia/Documents/ceciliak/Work stuff (main)
$ git branch -M main

ceciliak@ICES371 MINGW64 /d/Cecilia/Documents/ceciliak/Work stuff (main)
$ git push -u origin main
Enumerating objects: 31, done.
Counting objects: 100% (31/31), done.
Delta compression using up to 8 threads
Compressing objects: 100% (29/29), done.
Writing objects: 64% (20/31), 91.66 MiB | 544.00 KiB/s
.
```

Microsoft SQL Server Management Studio 18

main 1 branch 0 tags

Go to file

Add file

Code



cekv Initial commit for course materials

039dd19 1 minute ago 1 commit



Tidyverse R playbook

Initial commit for course materials

1 minute ago



Udemy courses

Initial commit for course materials

1 minute ago



creating-visualizations-base-r-graphics

Initial commit for course materials

1 minute ago



.gitignore

Initial commit for course materials

1 minute ago



All things R Data Science.R

Initial commit for course materials

1 minute ago



R training.Rproj

Initial commit for course materials

1 minute ago

Help people interested in this repository understand your project by adding a README.

Add a README

At

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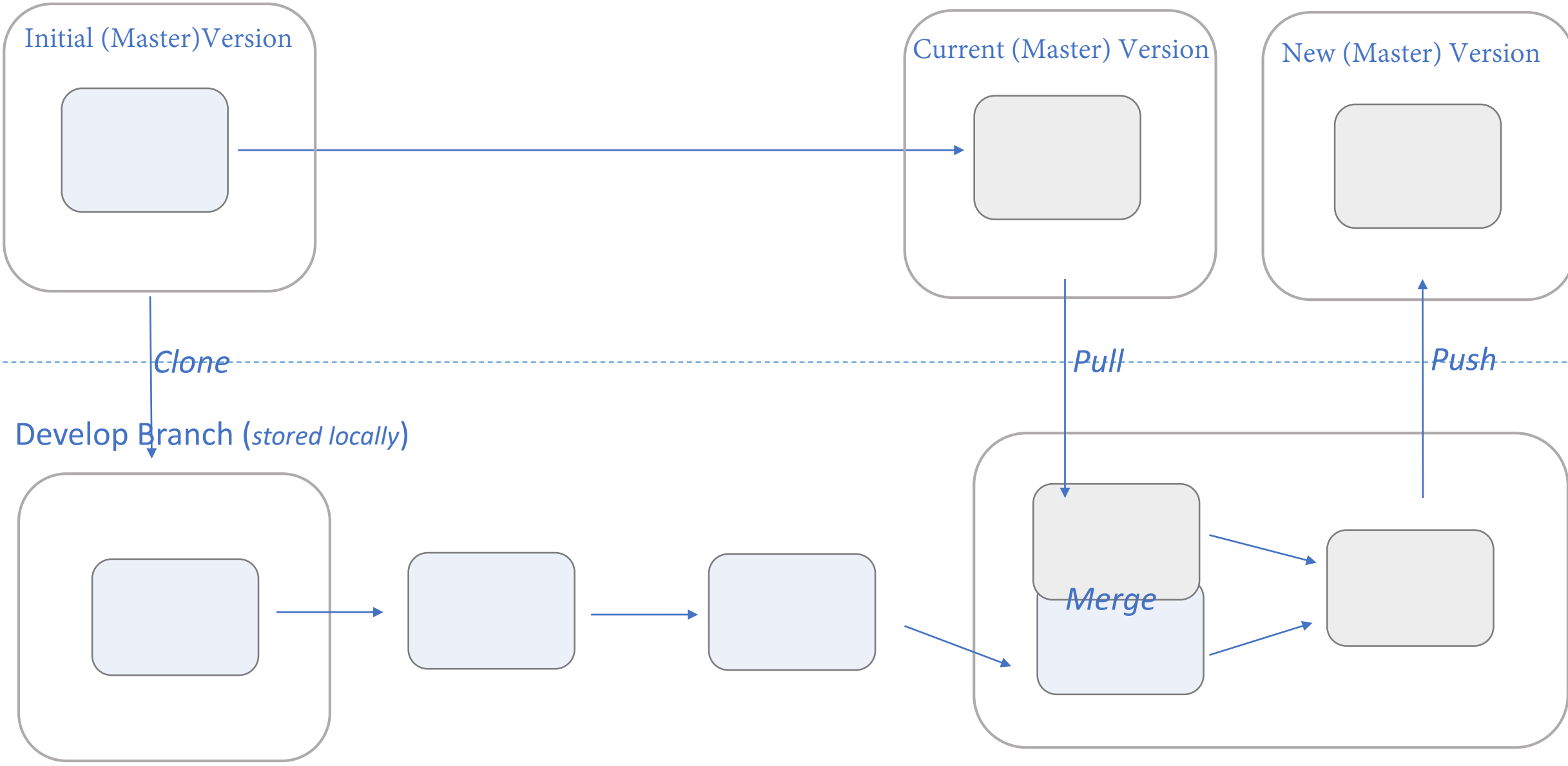
No

Put

La



Master Branch (from a central repository, e.g. GitHub)





# Updating repo from RStudio

cekv / Taf-tutorial Public

 Pin

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

 main ▾

 1 branch  0 tags

[Go to file](#)

[Add file](#) ▾

[Code](#) ▾



cekv Update worksheet script

af98169 10 minutes ago  3 commits



Work stuff

Updating the worksheet script

14 minutes ago



bootstrap

Updating the worksheet script

14 minutes ago



.gitignore

Updating the worksheet script

14 minutes ago



DISCLAIMER\_GIS.txt

Updating the worksheet script

14 minutes ago



HadSST.4.0.1.0\_median.nc

Updating the worksheet script

14 minutes ago



LICENSE

Initial commit

39 minutes ago



README.md

Initial commit

39 minutes ago



Taf-tutorial.Rproj

Updating the worksheet script

14 minutes ago



Worksheet.R

Update worksheet script

10 minutes ago



cars.csv

Updating the worksheet script

14 minutes ago



data.R

Updating the worksheet script

14 minutes ago



model.R

Updating the worksheet script

14 minutes ago



output.R

Updating the worksheet script

14 minutes ago



report.R

Updating the worksheet script

14 minutes ago



trees.csv

Updating the worksheet script

14 minutes ago

## About

This and that TAF

 [Readme](#)

 [MIT license](#)

☆ 0 stars

👁 1 watching

🍴 0 forks

## Releases

No releases published

[Create a new release](#)

## Packages

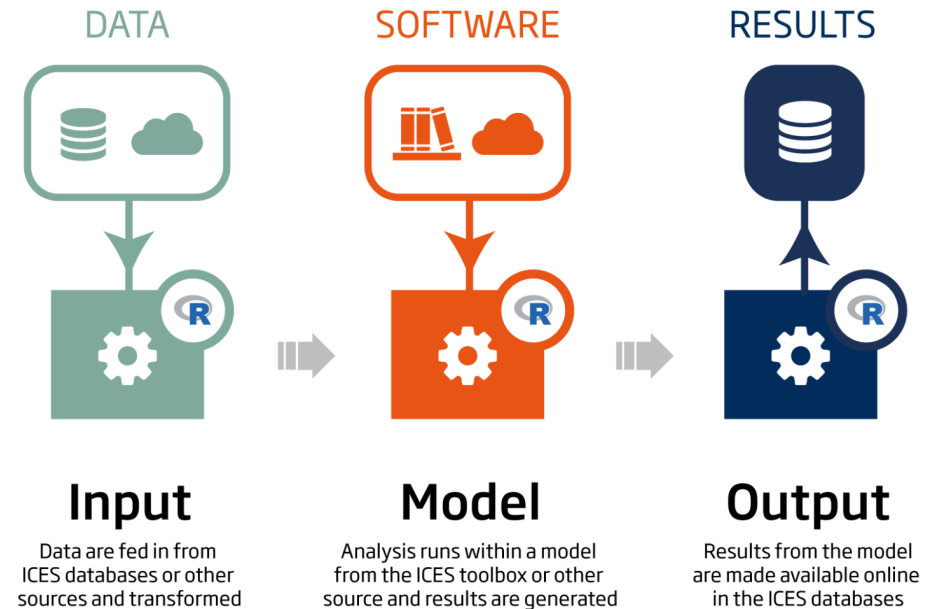
No packages published

[Publish your first package](#)

# ICES on GitHub – Transparent Assessment Framework



- ICES has 4 GitHub sites
  - ⚙ TAF
  - ⚙ Expert Groups / Workshops
  - ⚙ ICES tools development
  - ⚙ ICES tools production



## FAIR principles

Findable – Accessible – Interoperable – Reusable

```
install.packages("icesTAF")
```

master 4 branches 29 tags

Go to file

Add file

Code


 colinpmillar	cran submission	2508d02 5 days ago	🕒 674 commits
 R	add install.deps argument to add.data.script	3 months ago	
 man	add install.deps argument to add.data.script	3 months ago	
 .Rbuildignore	cran submission	5 days ago	
 .gitignore	mundane changes	5 days ago	
 .travis.yml	Simplify .travis.yml	3 years ago	
 CRAN-SUBMISSION	cran submission	5 days ago	
 DESCRIPTION	cran submission	5 days ago	
 LICENSE	Create LICENSE	2 years ago	
 NAMESPACE	add function to install TAF analysis dependencies	3 months ago	
 NEWS.md	remove TAF functions	3 months ago	
 README.md	http -> https	3 years ago	
 cran-comments.md	cran submission	5 days ago	

☰ README.md

build passing CRAN 4.0.0 downloads 690/month downloads 50K

## About

Functions to support the ICES Transparent Assessment Framework

 Readme GPL-3.0 license 2 stars 8 watching 6 forks

## Releases 27

 CRAN release 3.5-0 Latest  
on May 16, 2020[+ 26 releases](#)

## Packages

No packages published

## Contributors 5



# Get started!

- Signup for a GitHub account  
<https://github.com/join>
- Download Git (<https://git-scm.com/downloads>)
- Setup Git with GitHub  
<https://docs.github.com/en/get-started/quickstart/set-up-git>
- Create a repository  
<https://docs.github.com/en/get-started/quickstart/create-a-repo>
- Workshop repo  
[https://github.com/ices-eg/wk\\_WKTAF\\_2022](https://github.com/ices-eg/wk_WKTAF_2022)



# Usefull links

ICES Github pages

<https://github.com/ices-tools-prod>

<https://github.com/ices-tools-dev>

<https://github.com/ices-eg>

<https://github.com/ices-taf/doc/wiki>

GitHub help page

<https://docs.github.com/en>

ICES TAF page

<https://www.ices.dk/data/assessment-tools/Pages/transparent-assessment-framework.aspx>

Other links fro Git and GitHub

<https://happygitwithr.com/index.html>