Introduction to GitHub and GitHub Desktop

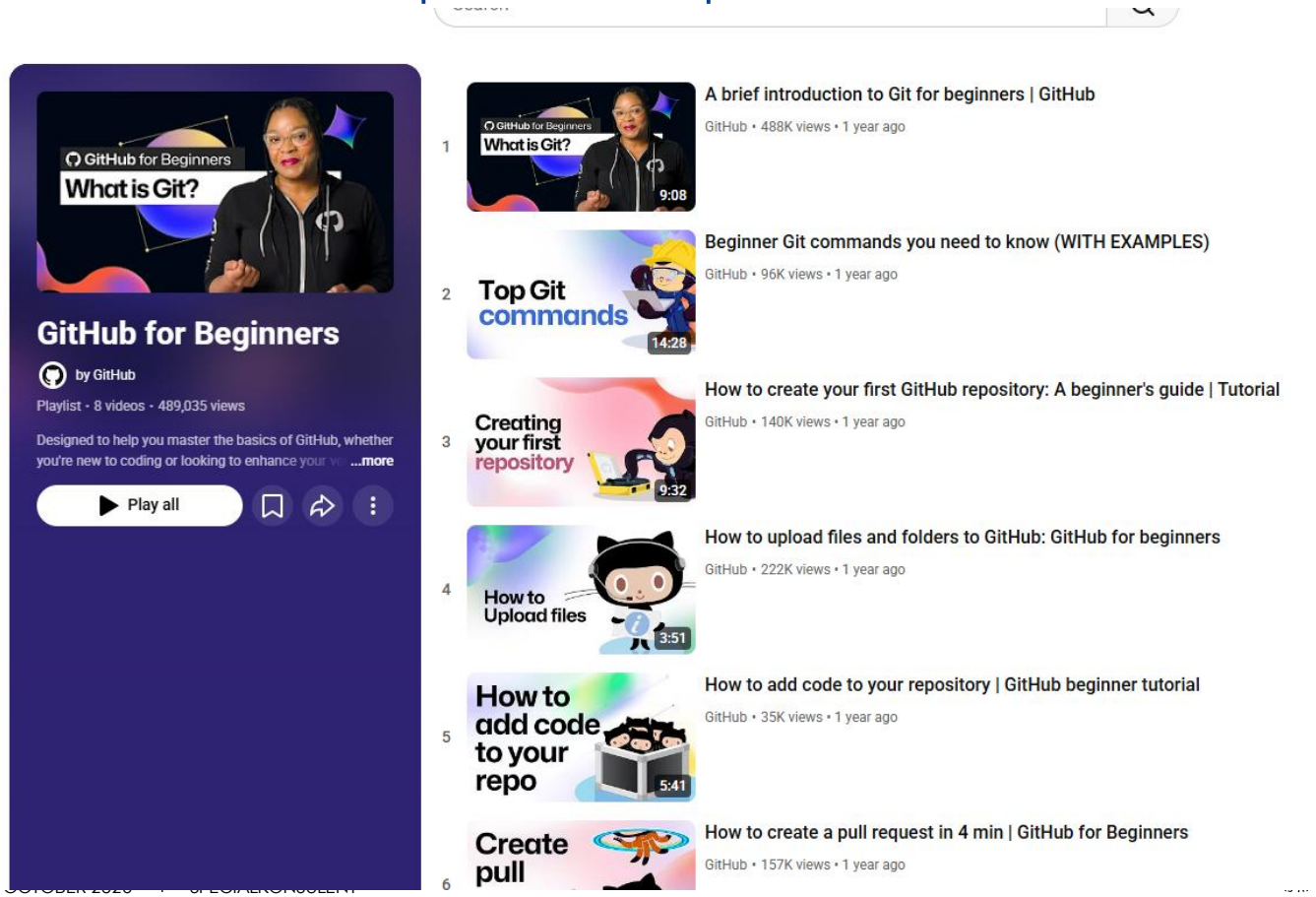
DEPARTMENT OF AGROECOLOGY
AARHUS UNIVERSITY

23. OCTOBER 2025

MAARIT MÄENPÄÄ
SPECIALKONSULENT

Online resources

https://www.youtube.com/playlist?list=PL0lo9MOBetEFcp4SCWinBdpmI9B2U25-f



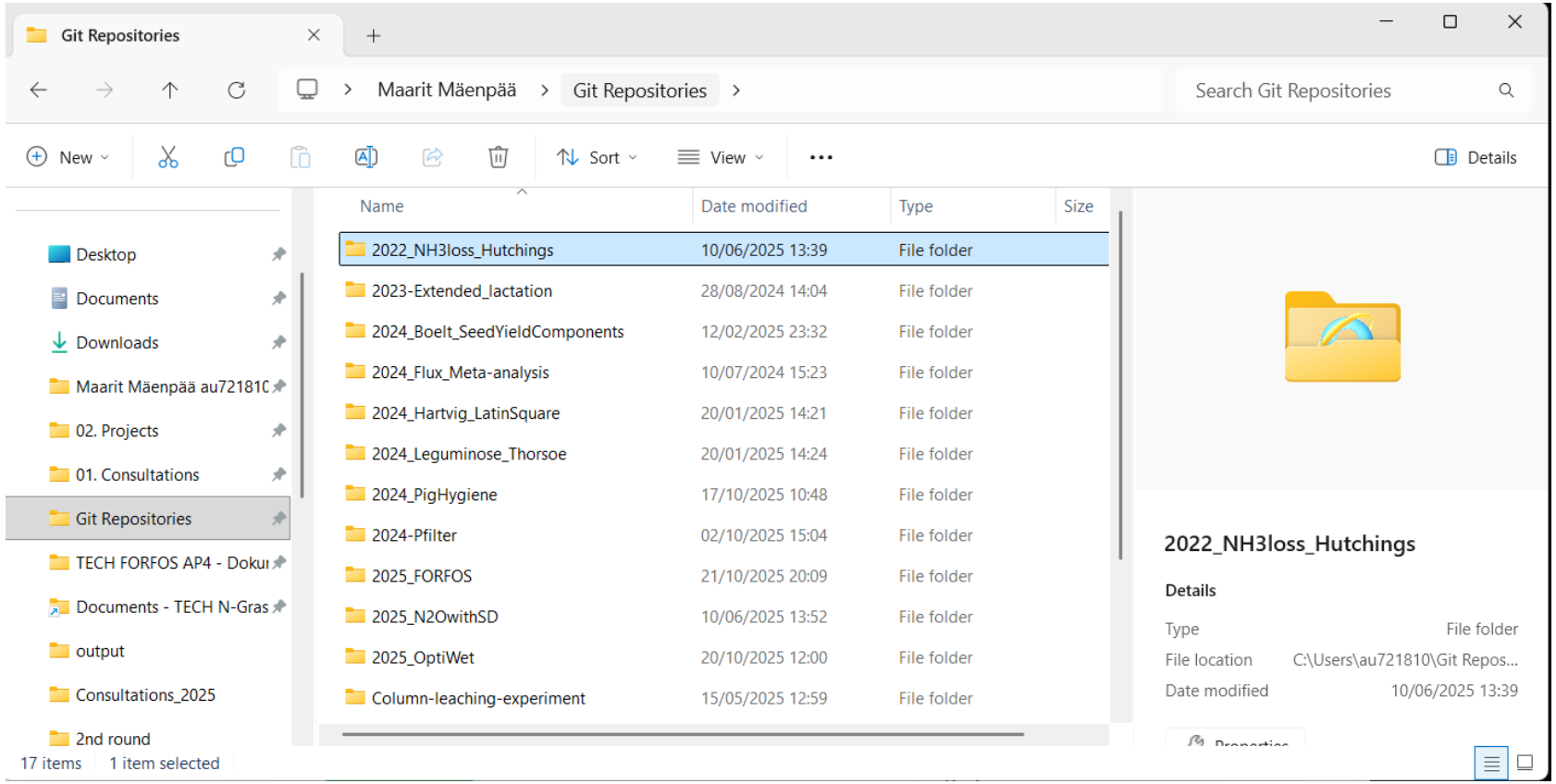
GitHub
Platform
The AI Powered Developer Platform to Build, Scale, and Deliver Secure Software
Powered by AI
Collaboration
Productivity
Security
Scale
Integrations & APIs

Vocabulary

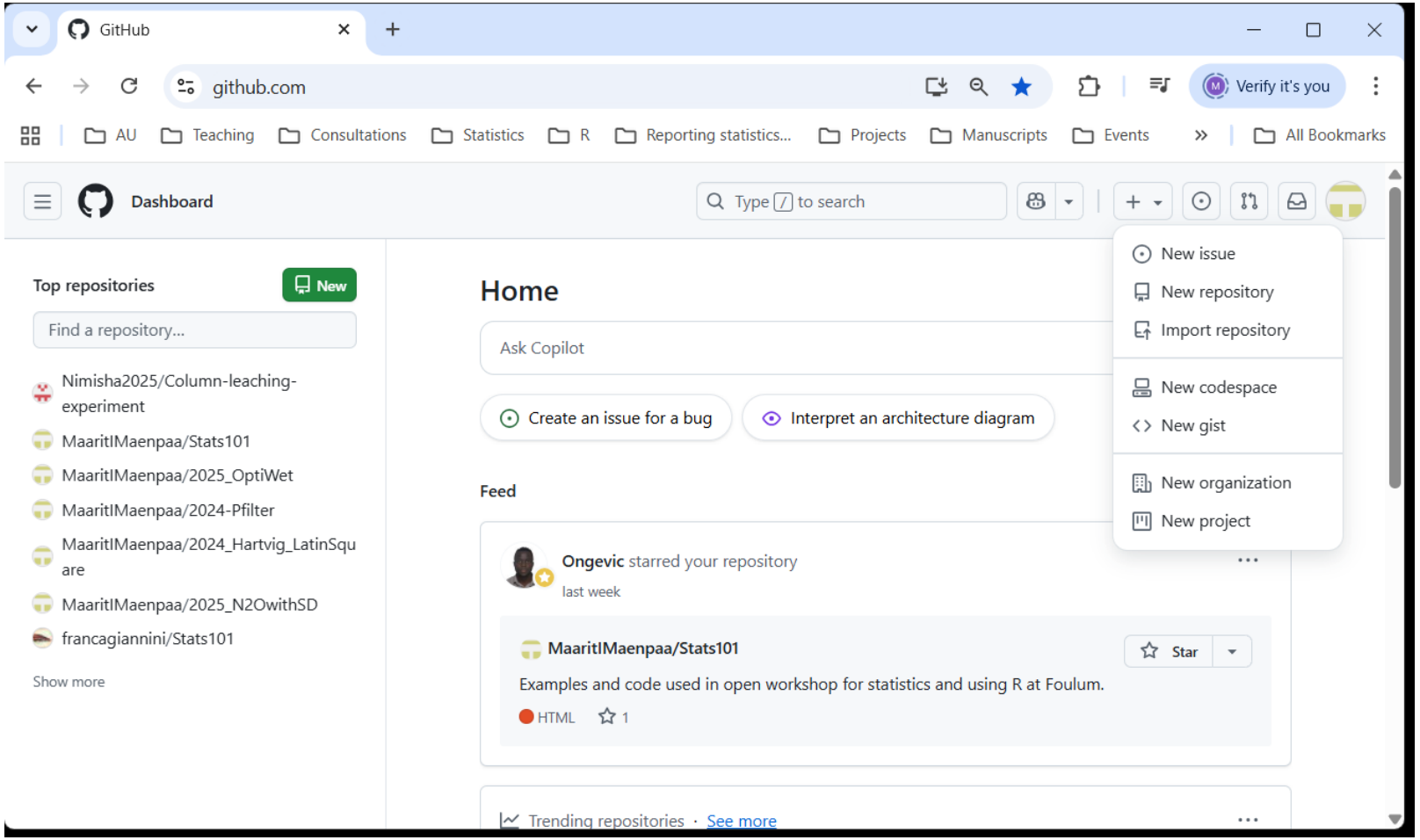
Git	Version control system that lets developers track changes, collaborate on code, and manage revisions over time.
GitHub	Cloud-based platform that uses Git.
GitHub Desktop	Graphical user interface (GUI) for using Git and interacting with repositories on GitHub
Repository	A place for all of your project's files and each file's revision history.

Creating a repository

Start by creating a folder in your computer where you wish to keep local versions of all your repositories.



Creating a repository



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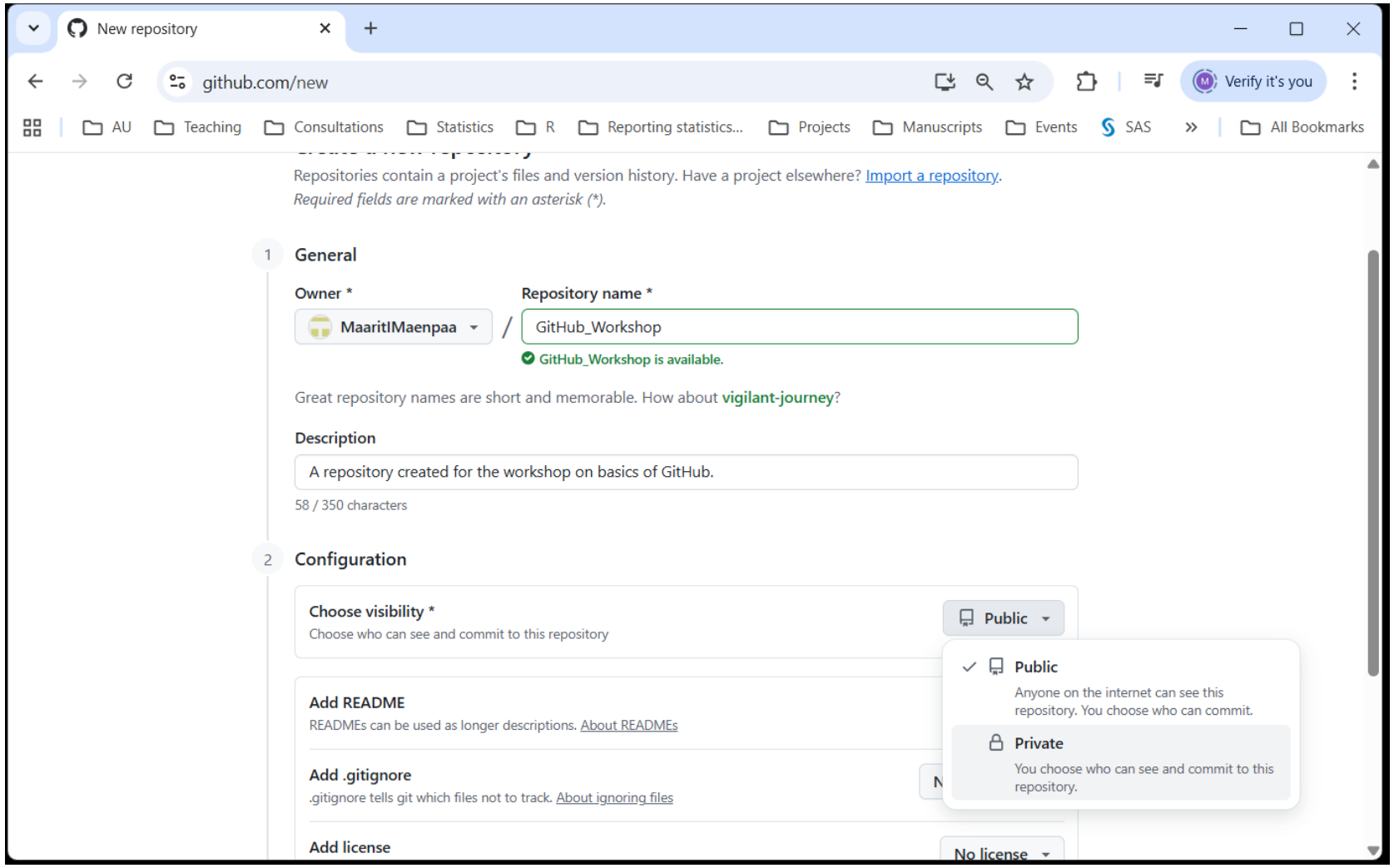
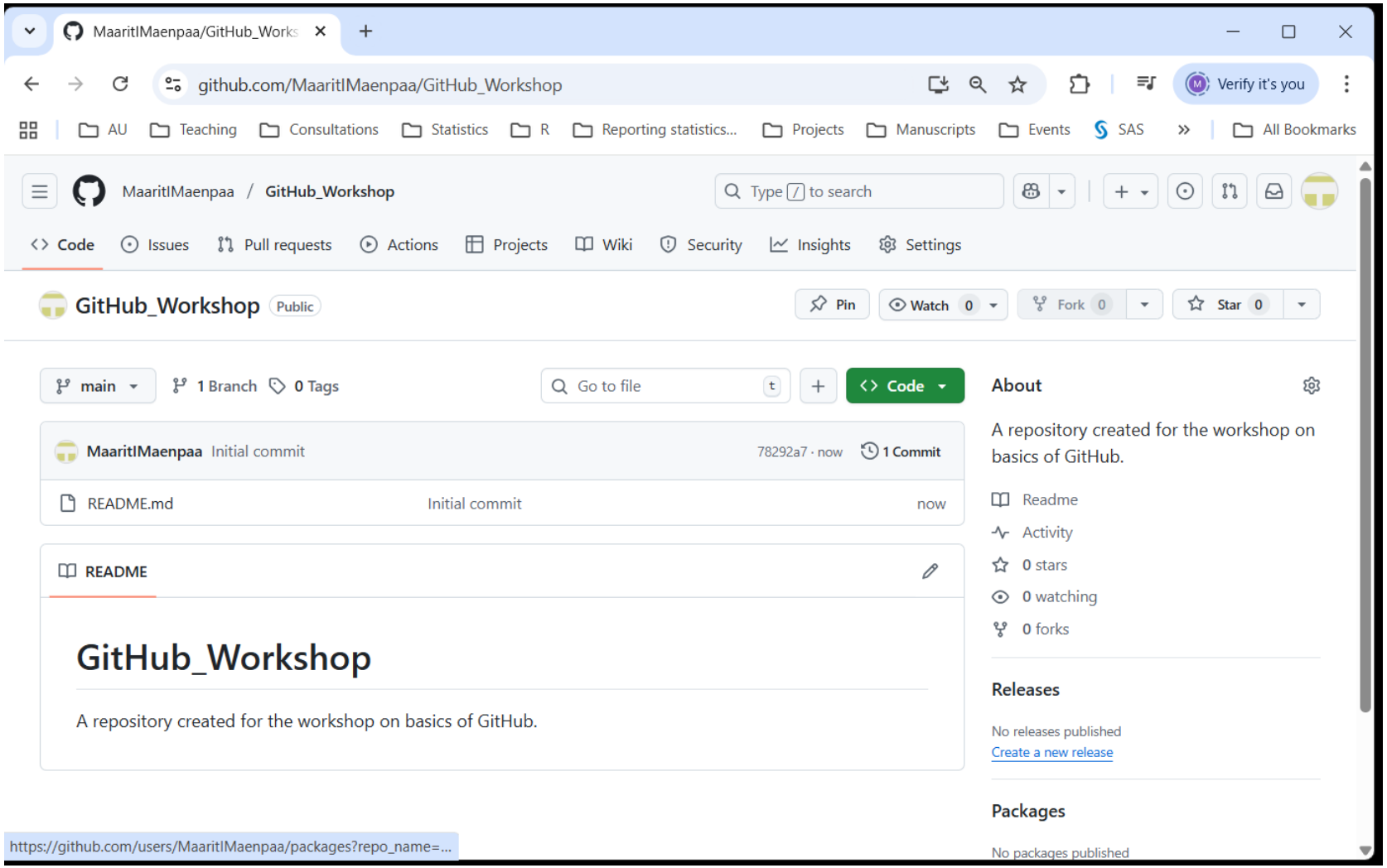


Creating a repository

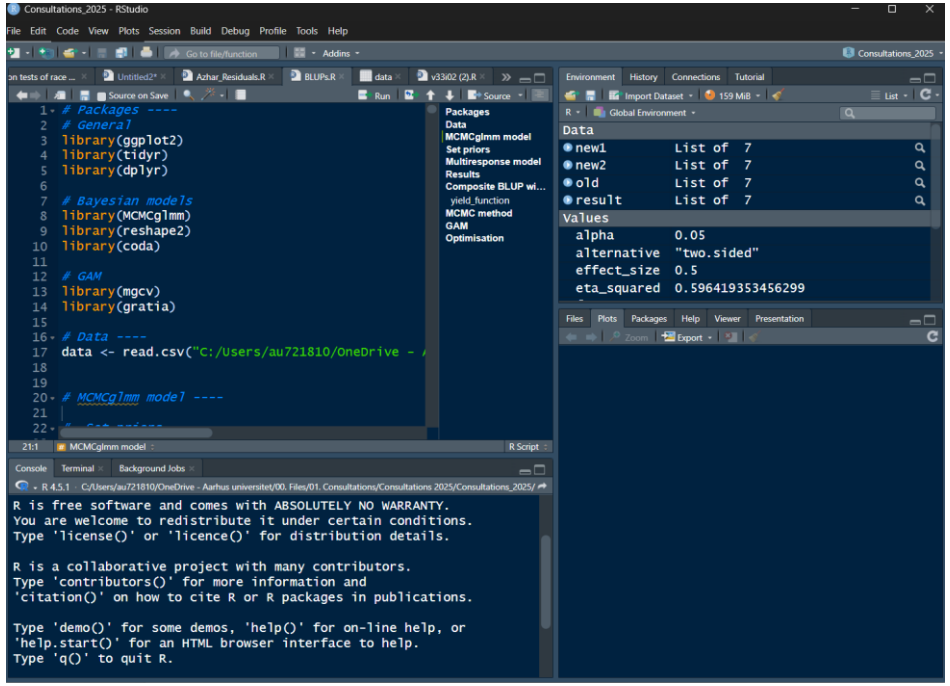


Exercise

1. Create a repository

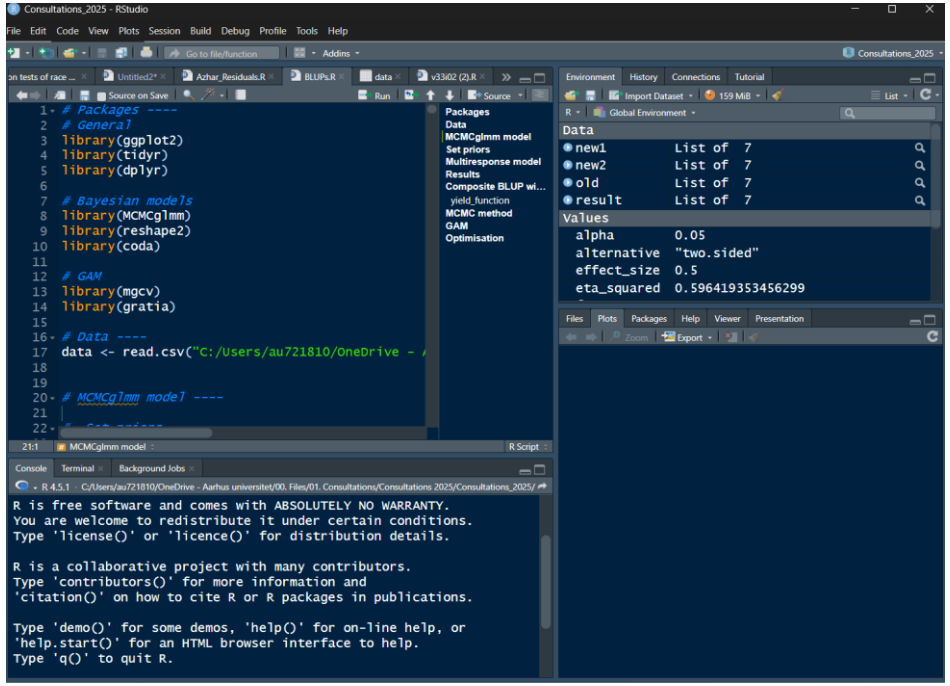
Working on a repository

Code stored locally

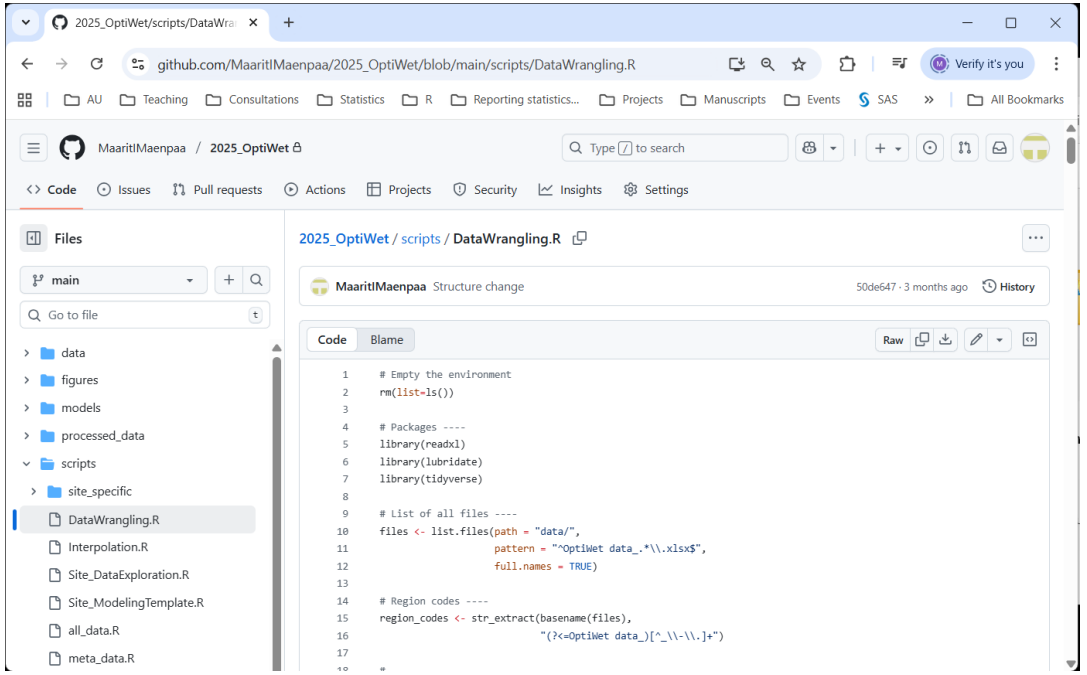


Working on a repository: vocabulary

Code stored locally



Code stored in the cloud (GitHub)



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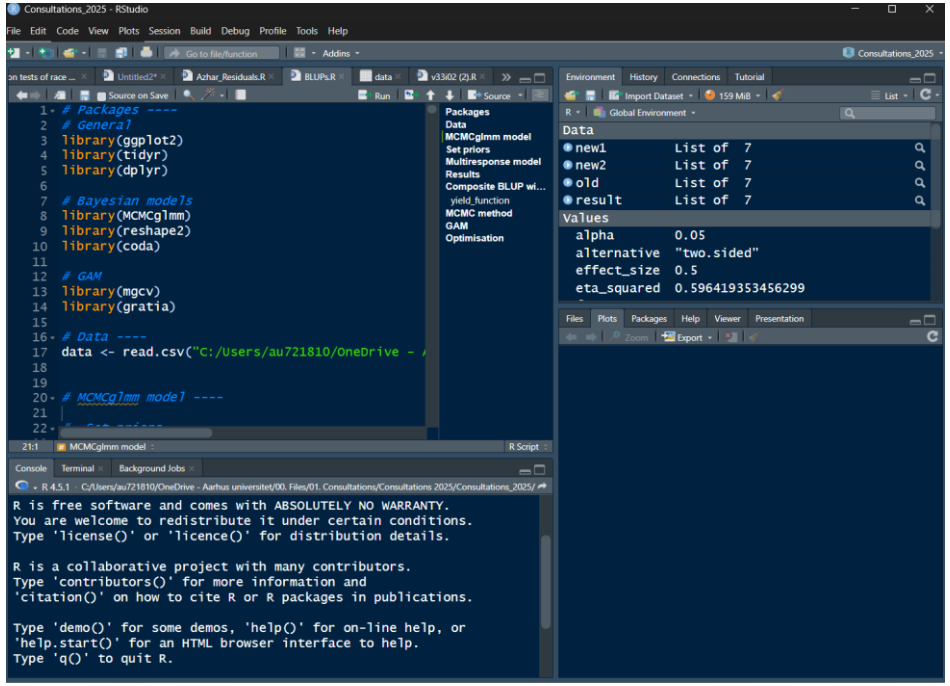

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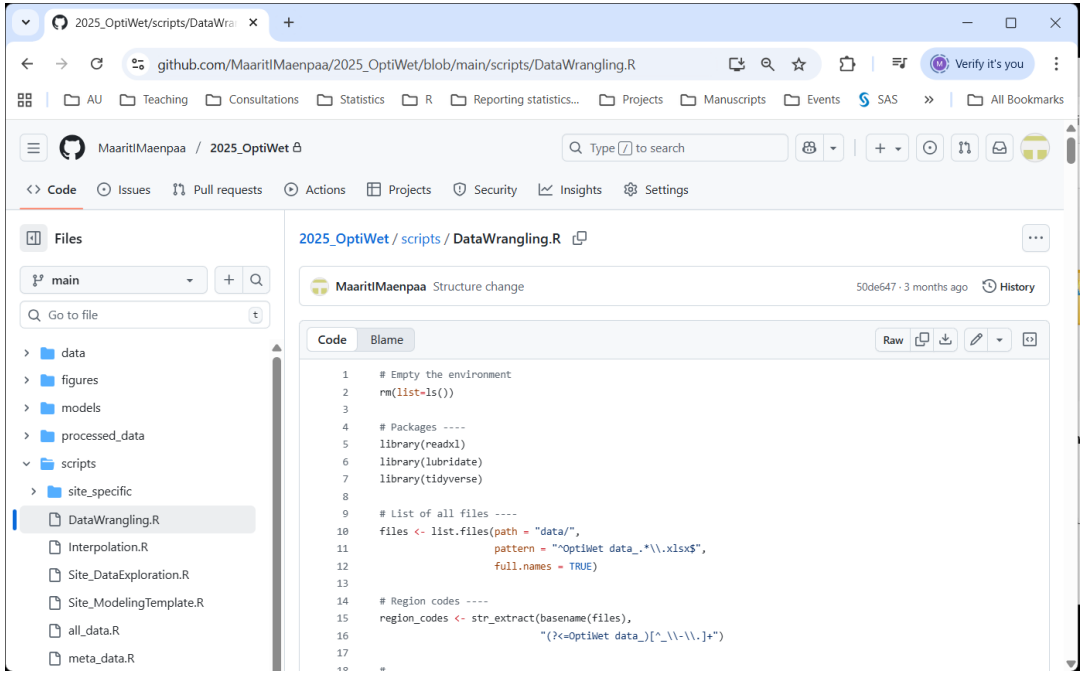
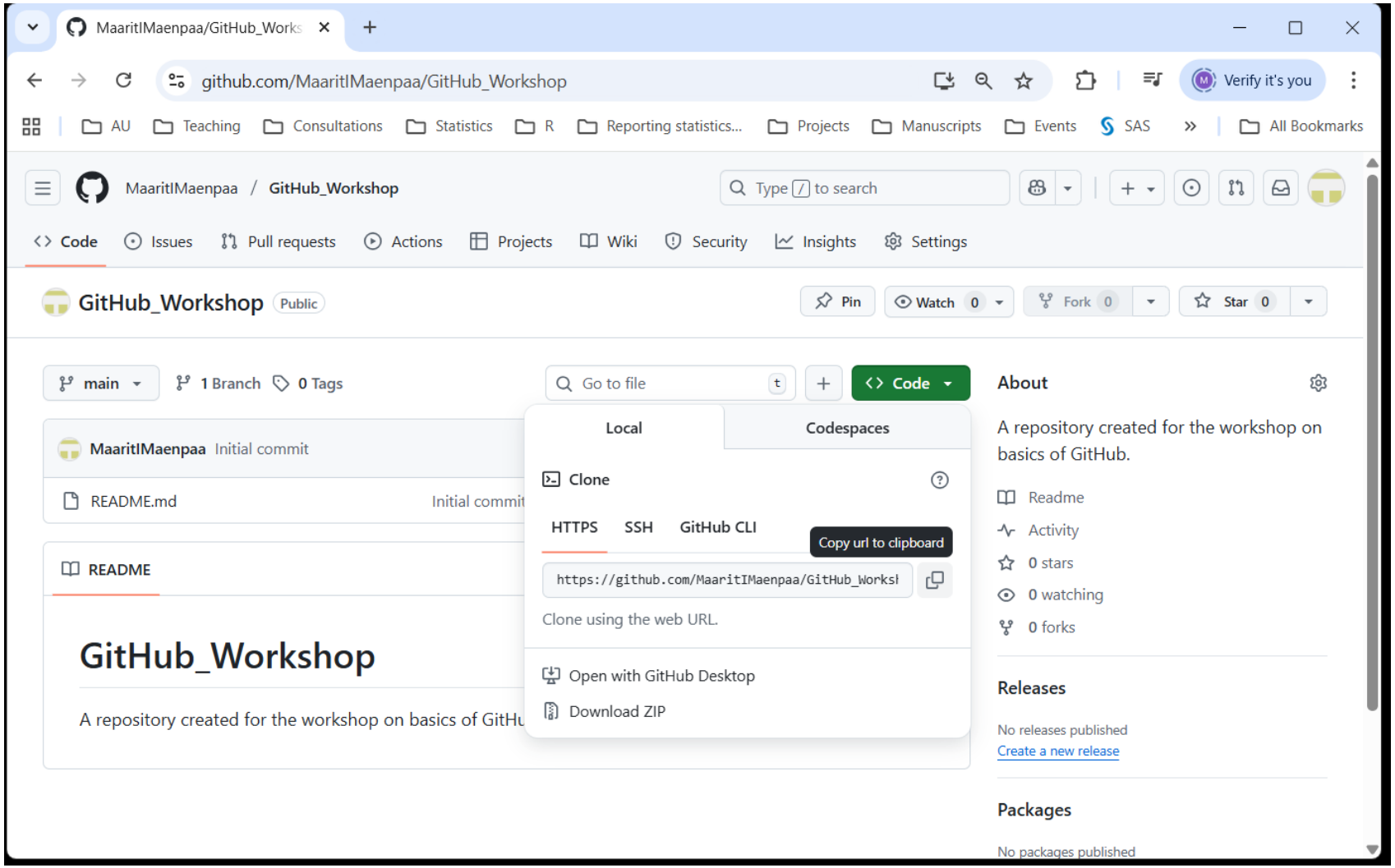


Creating a repository - cloning



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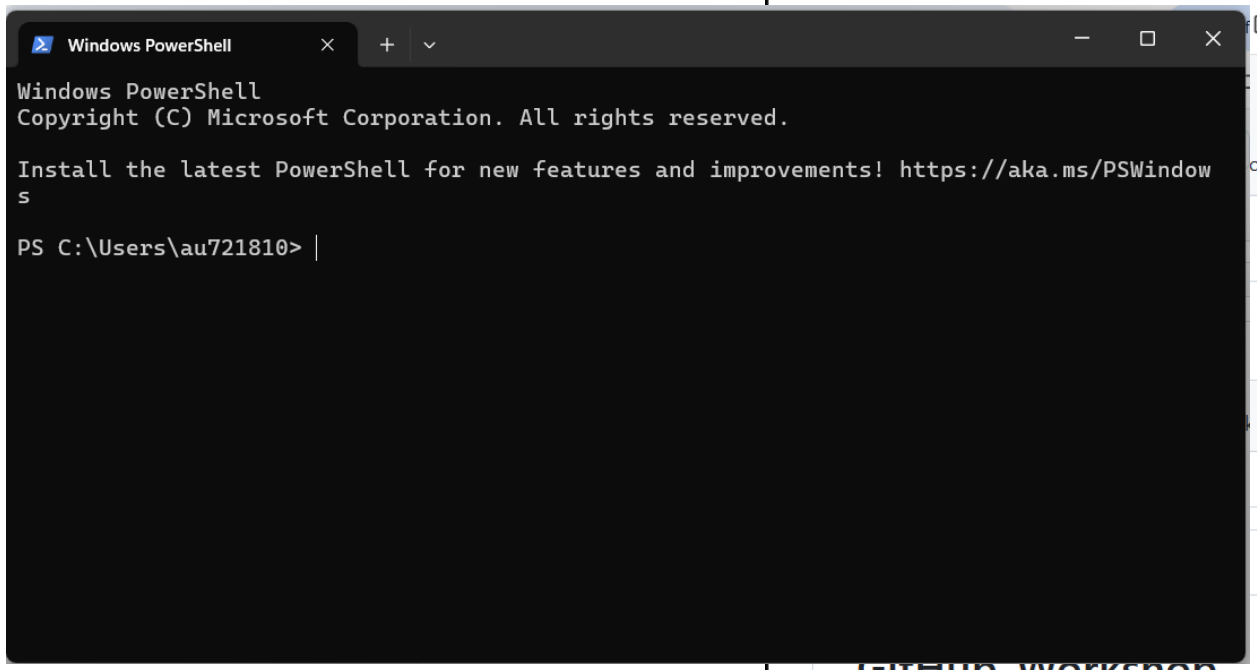

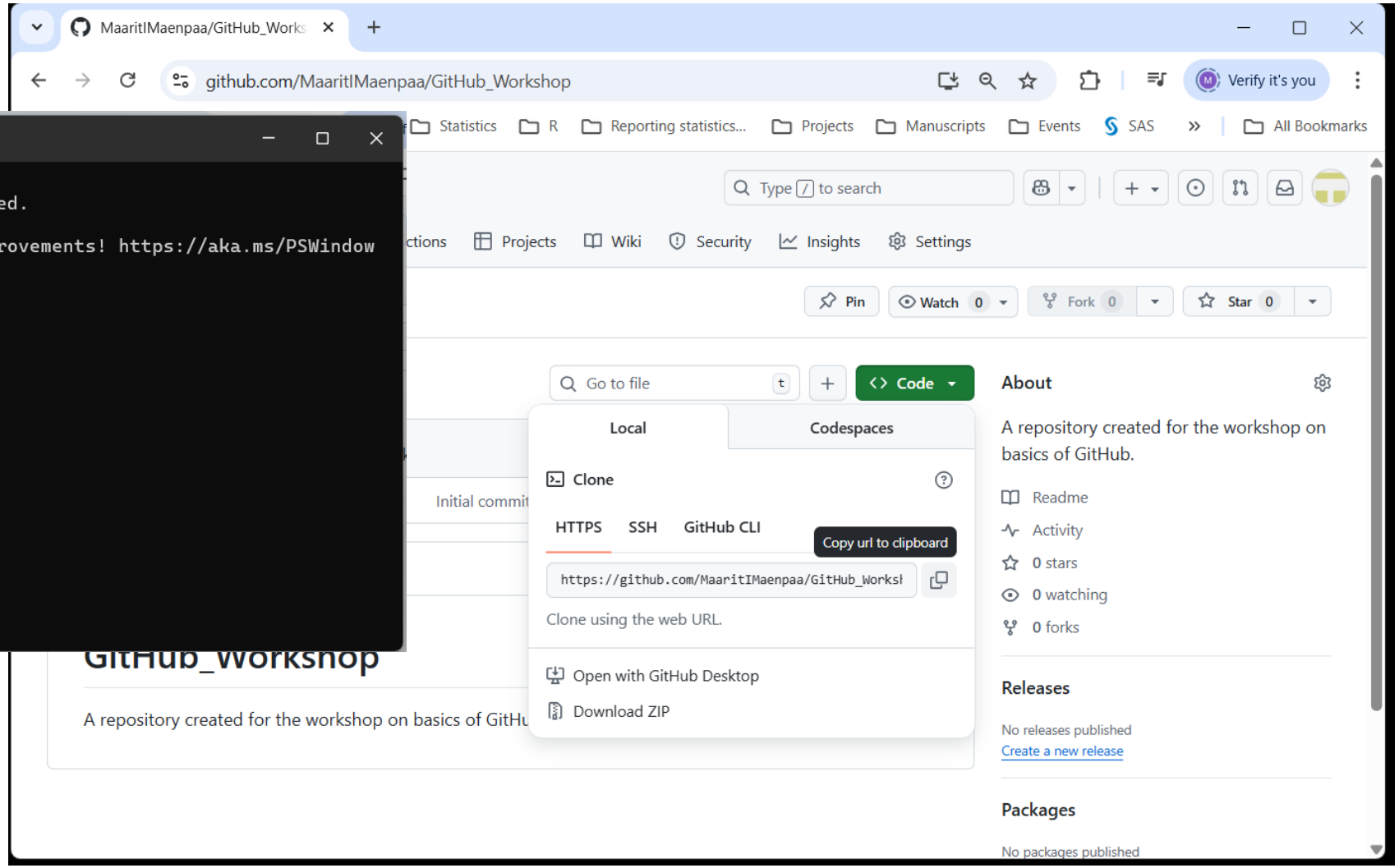

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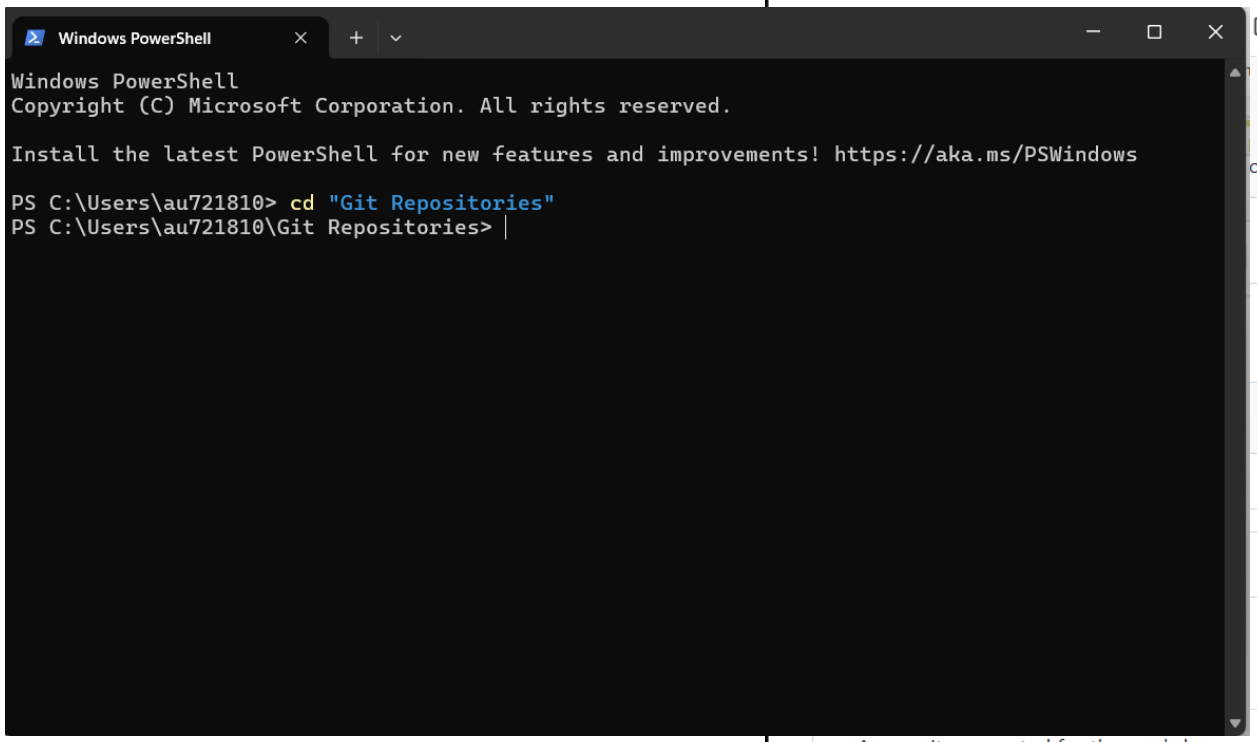

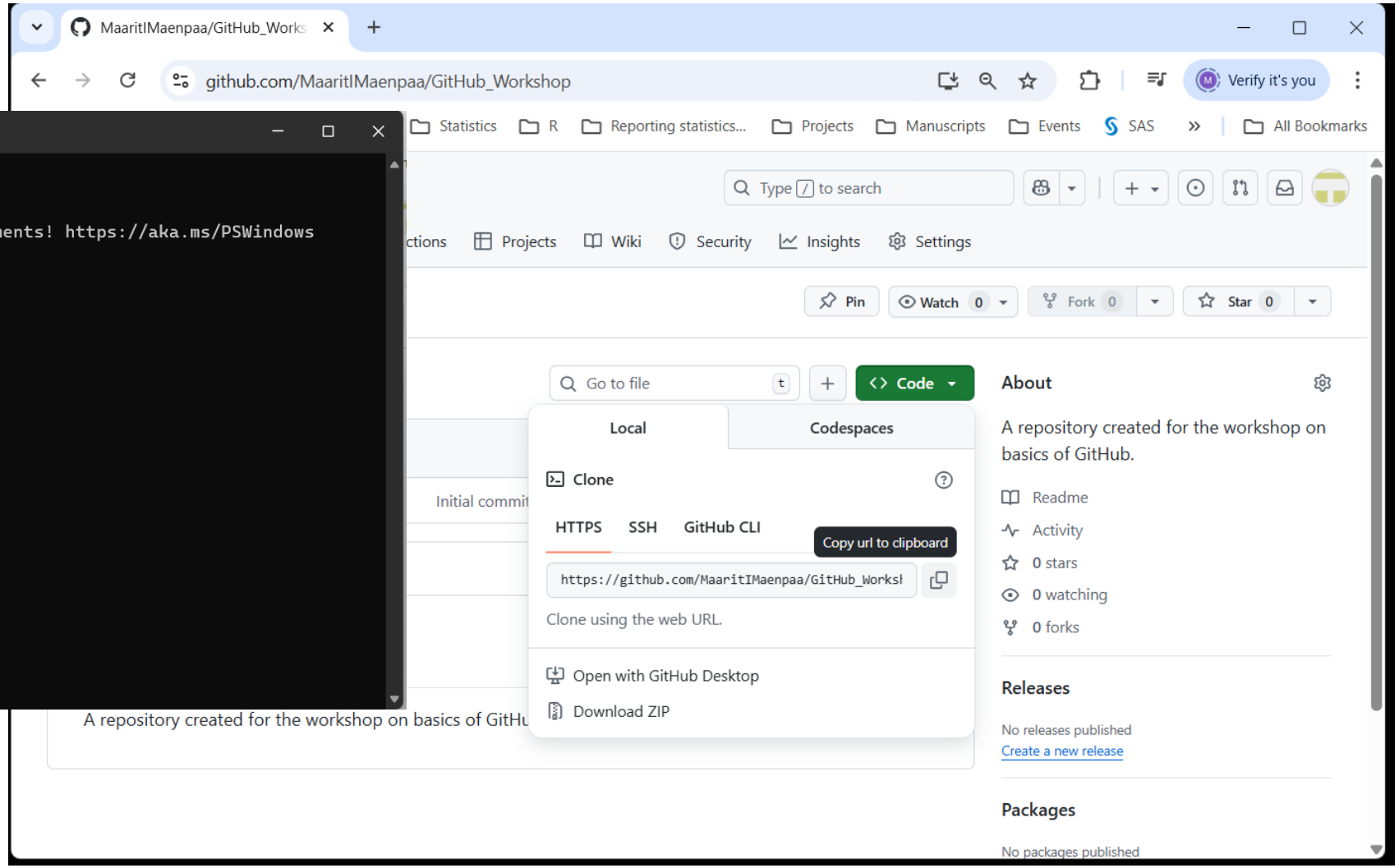

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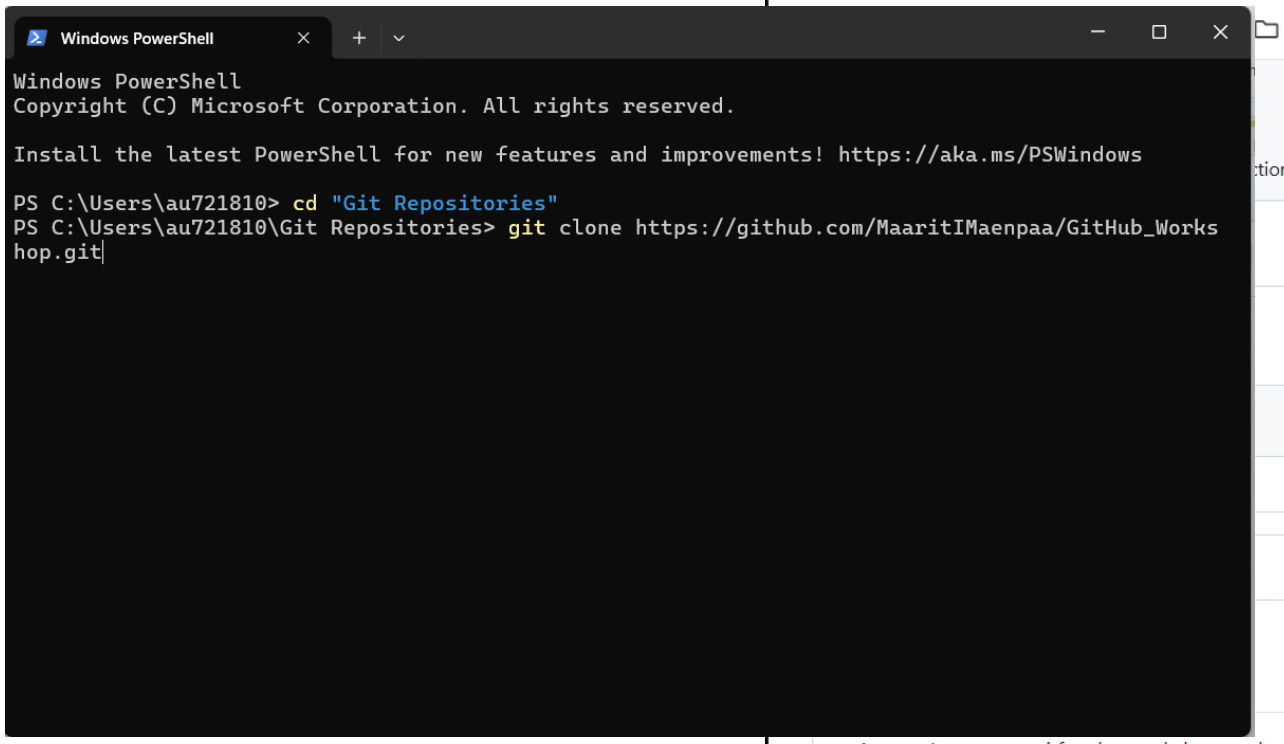

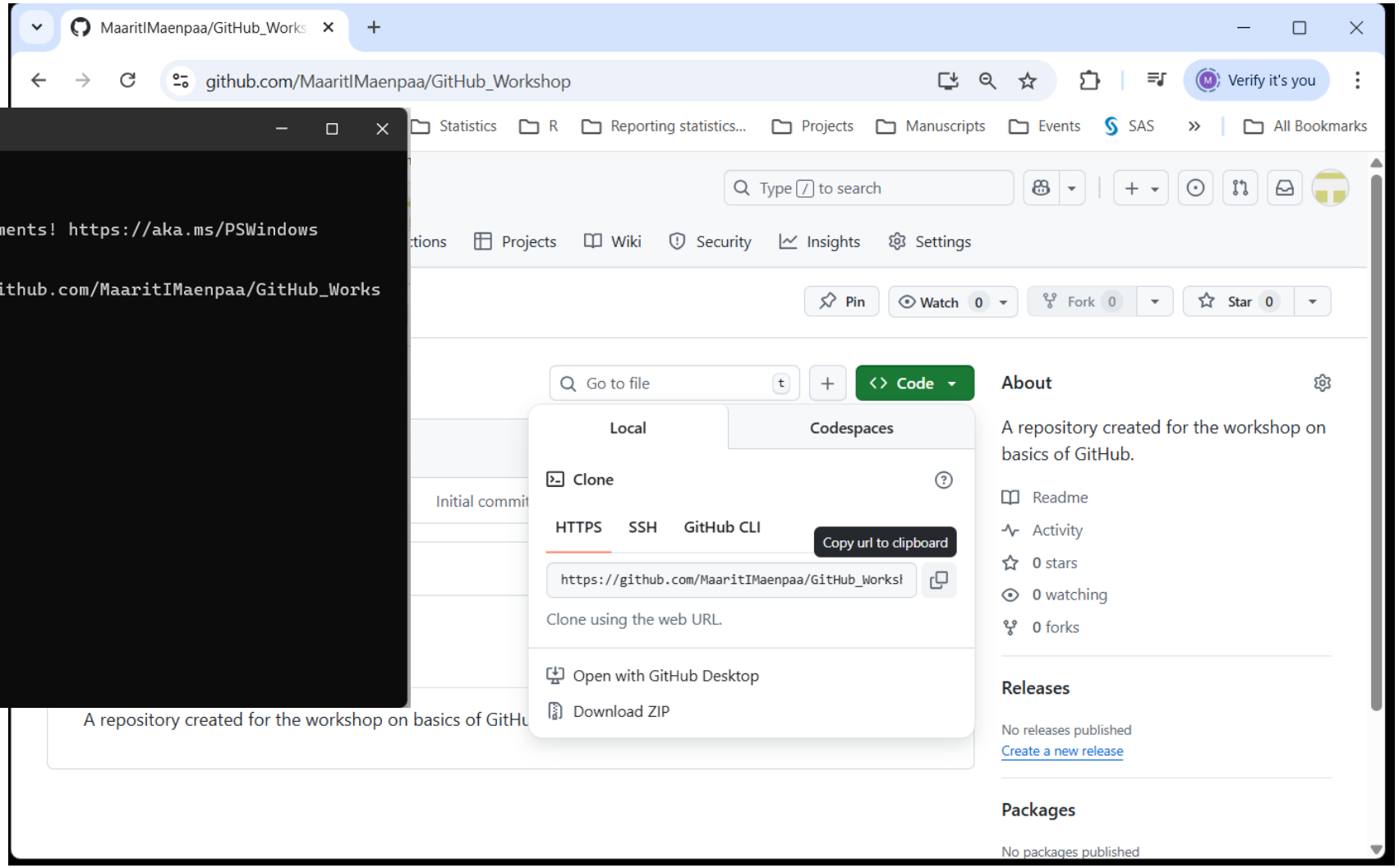

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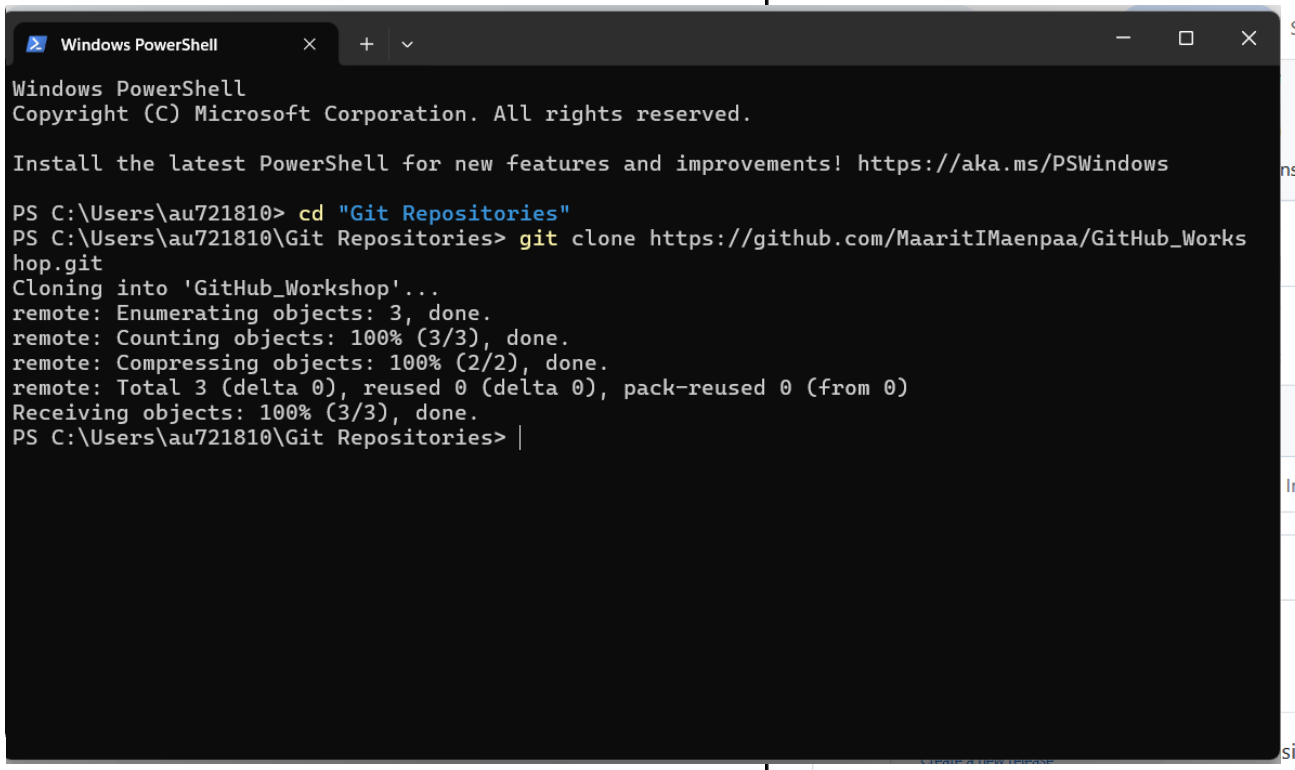

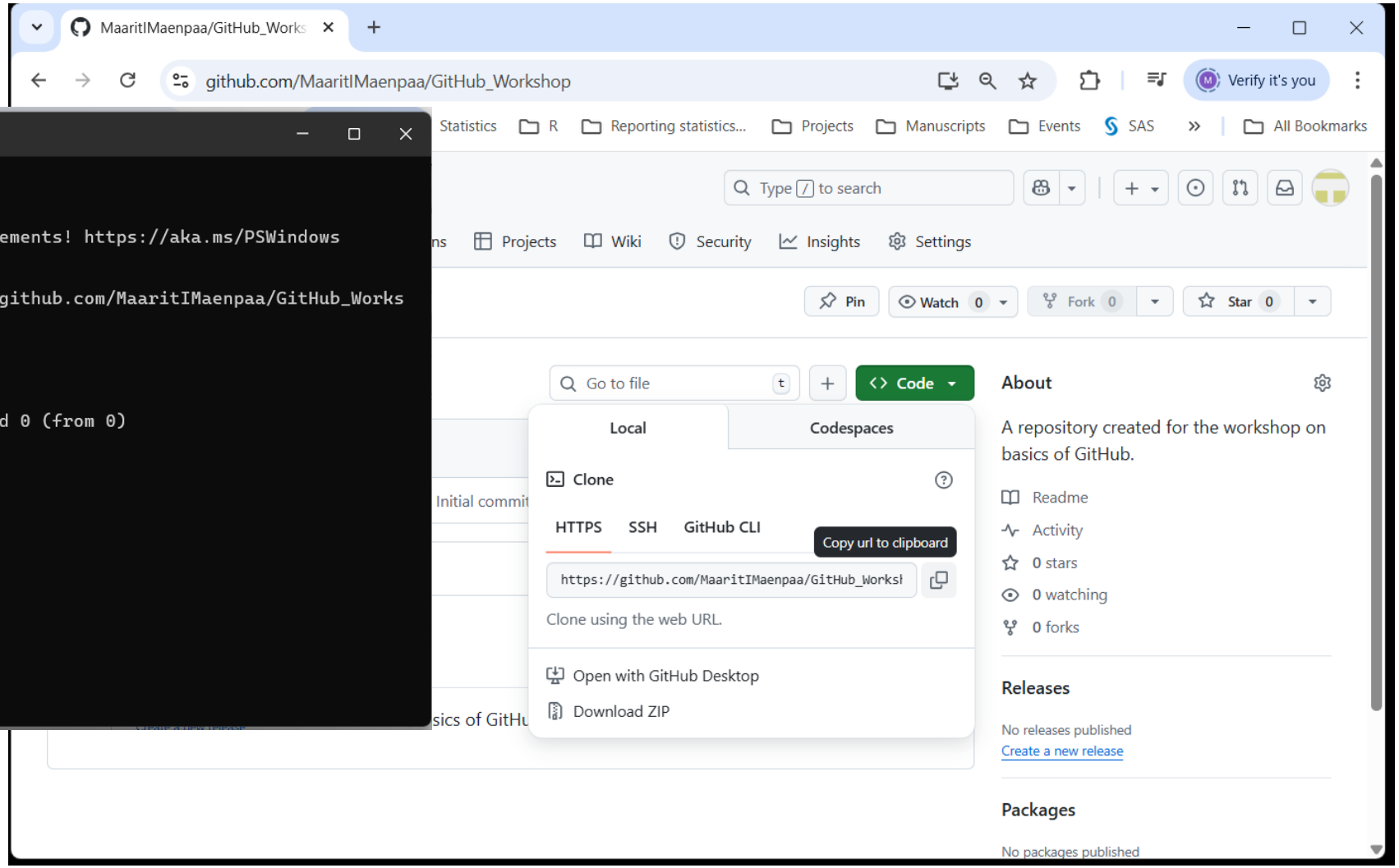

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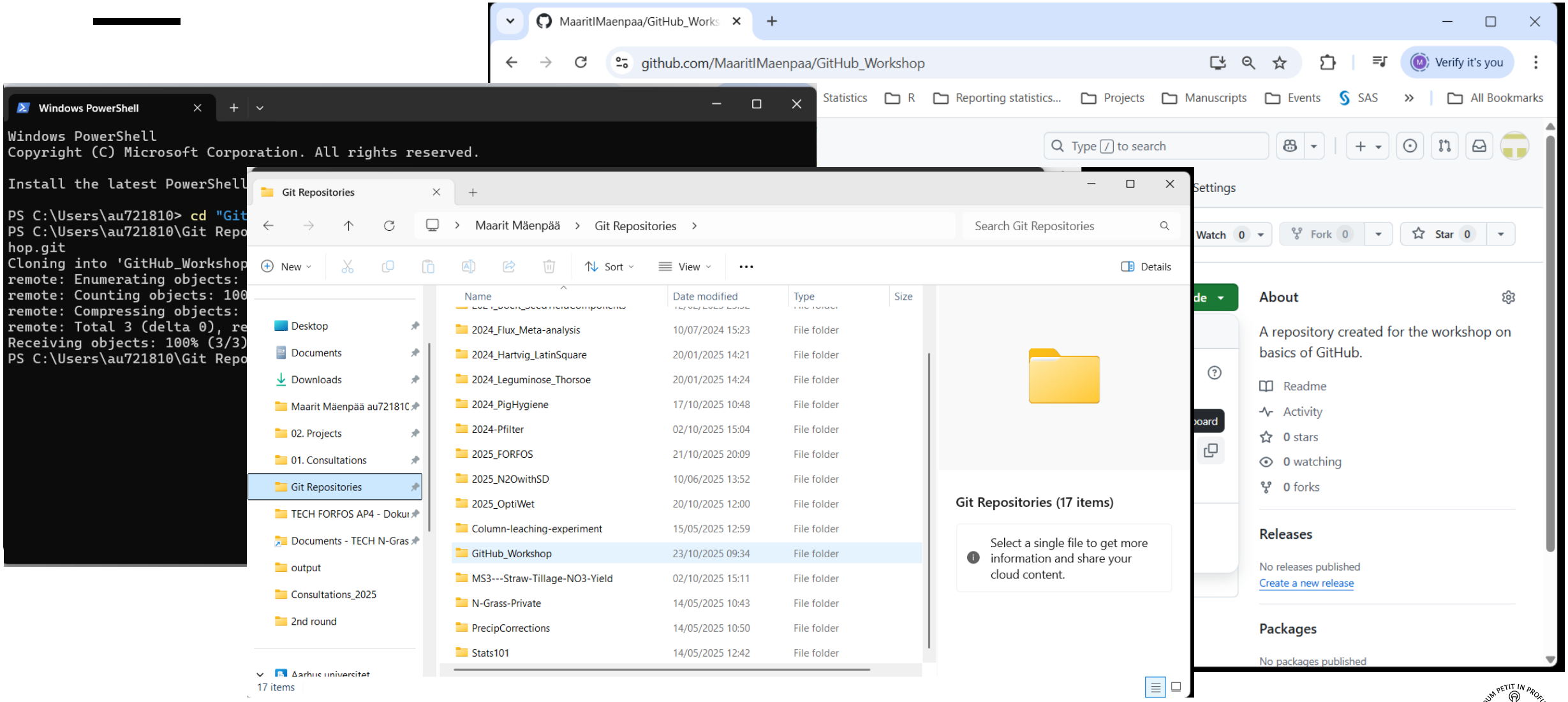
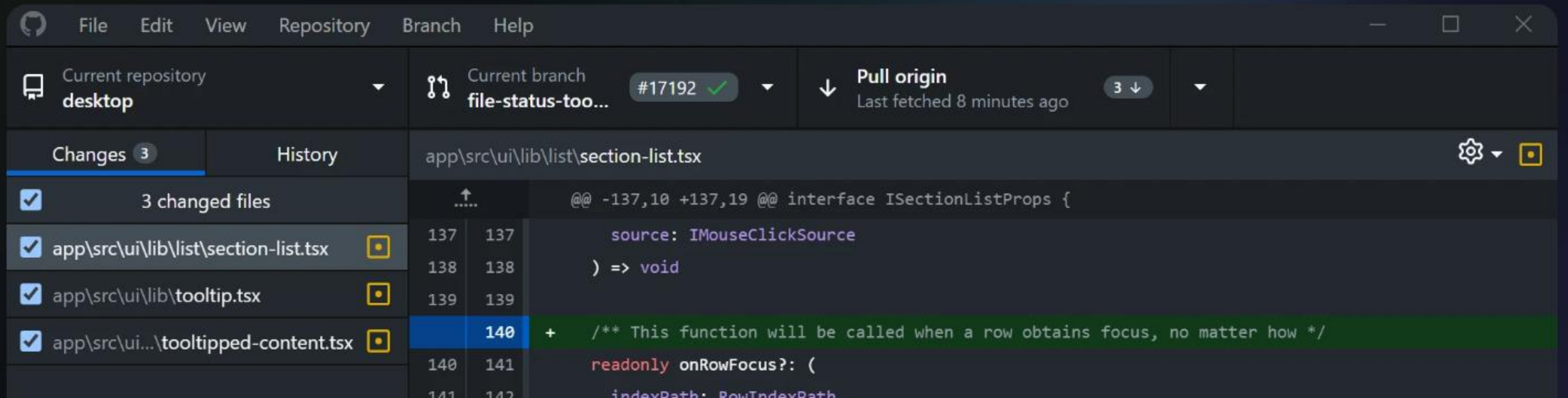


GitHub Desktop

Experience Git without the struggle

Whether you're new to Git or a seasoned user, GitHub Desktop simplifies your development workflow.

Download now



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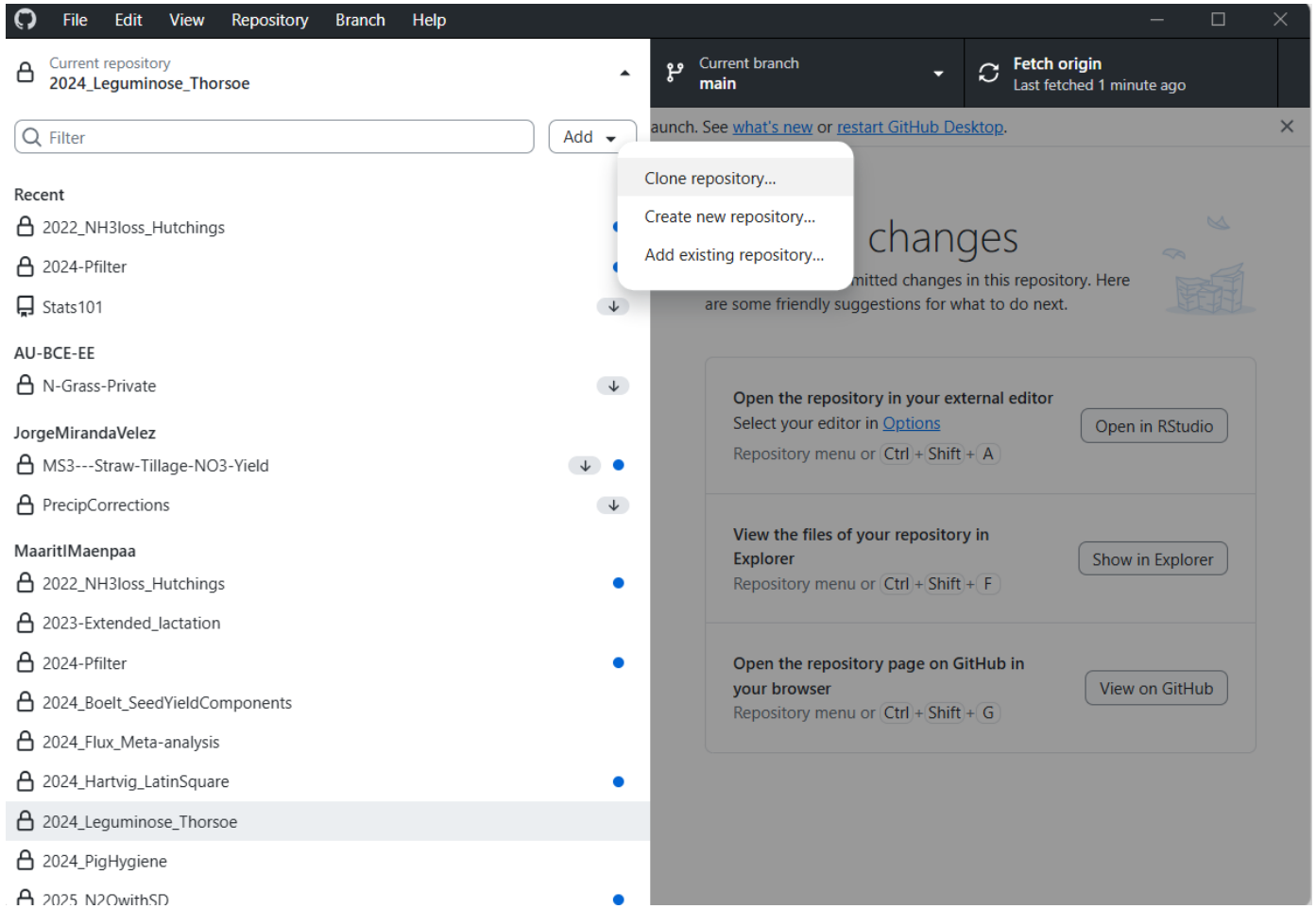
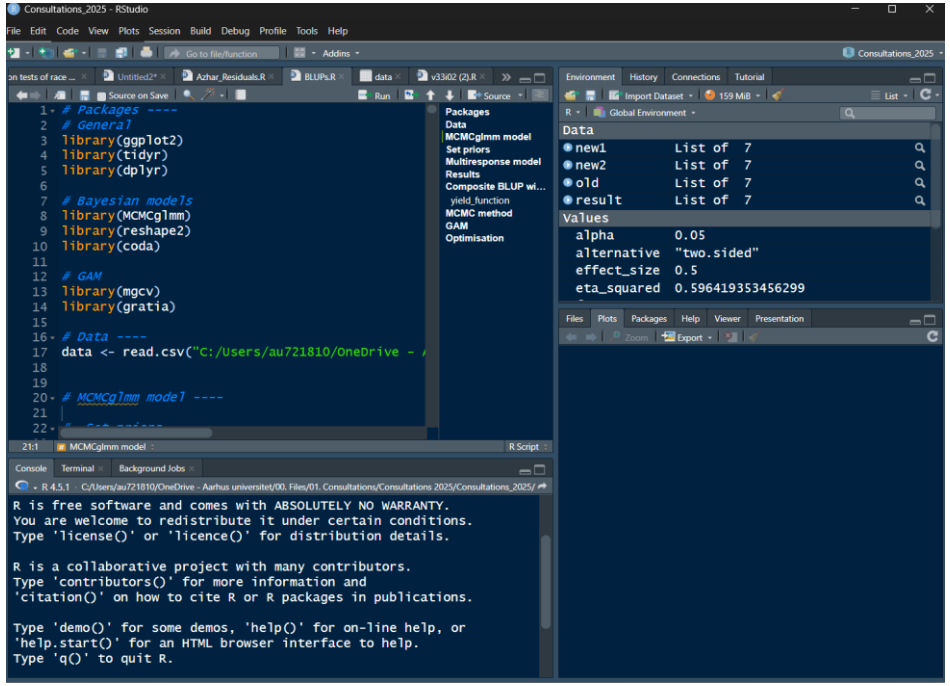


Exercise

1. Create a repository
2. Clone the repository

Working on a repository: vocabulary

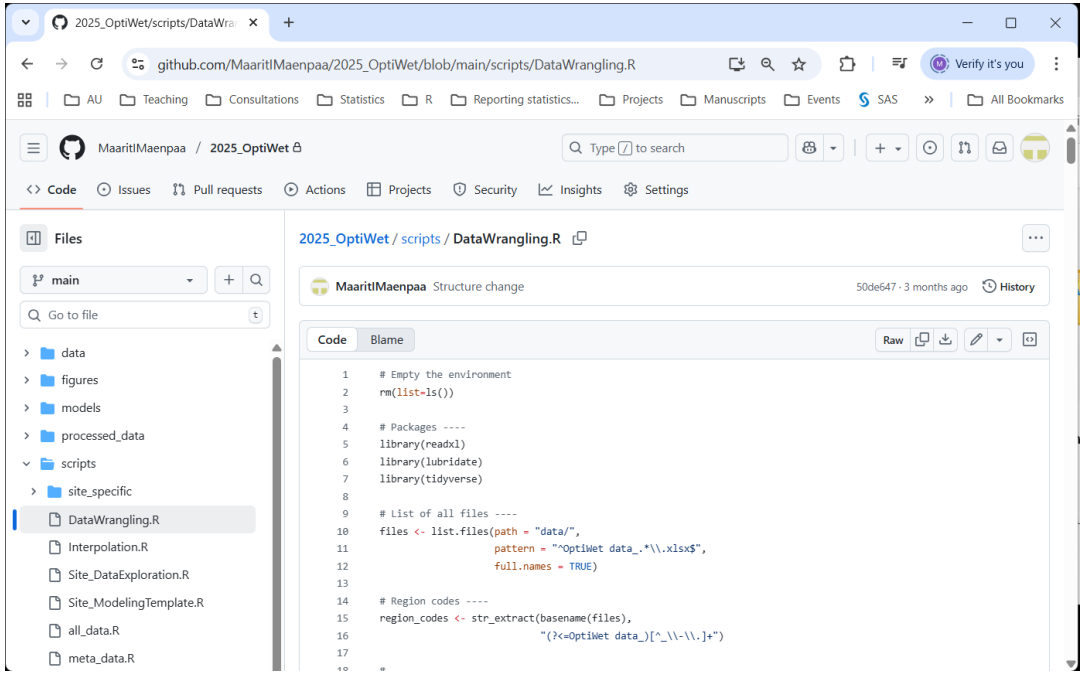
Code stored locally



Push

Pull

Code stored in the cloud (GitHub)



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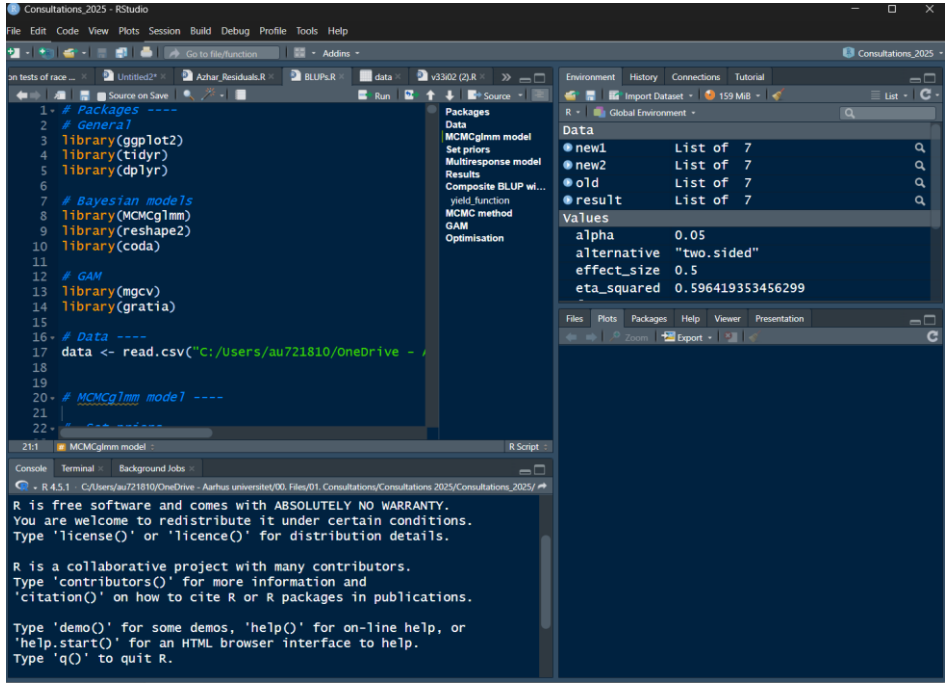

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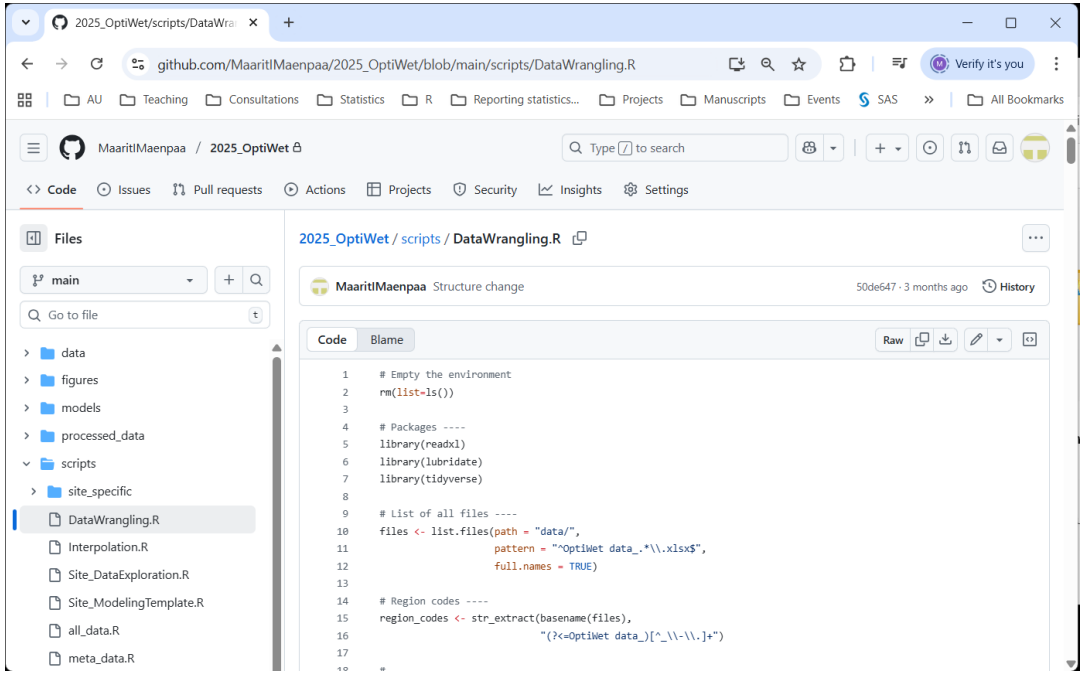

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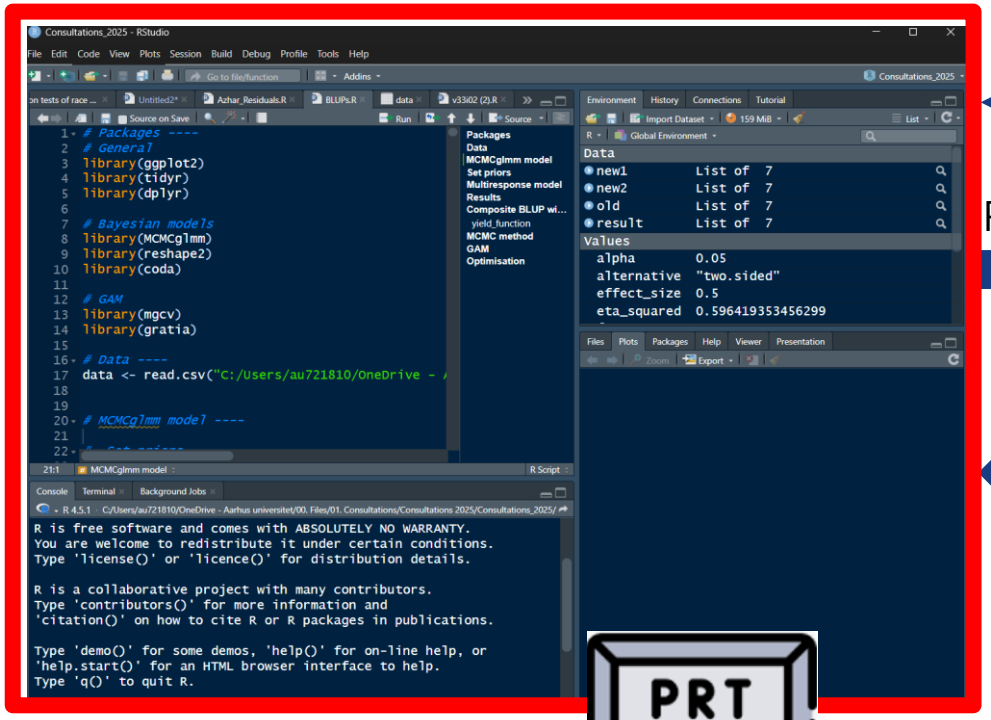


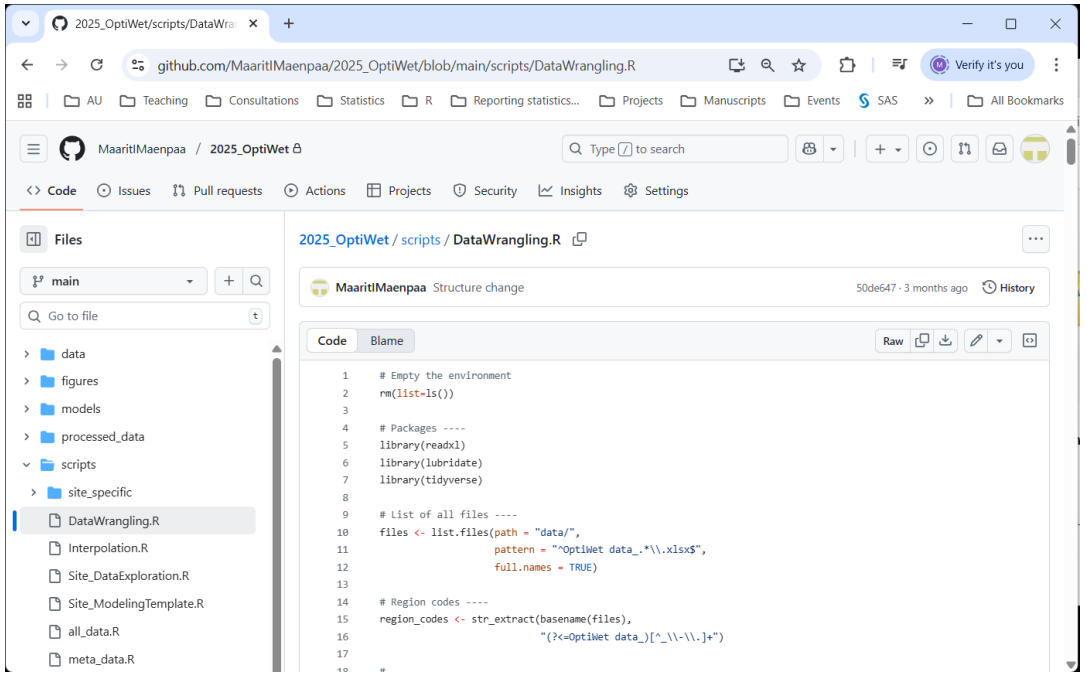
Commit

Fetch

Push

Pull

Code stored in the cloud (GitHub)



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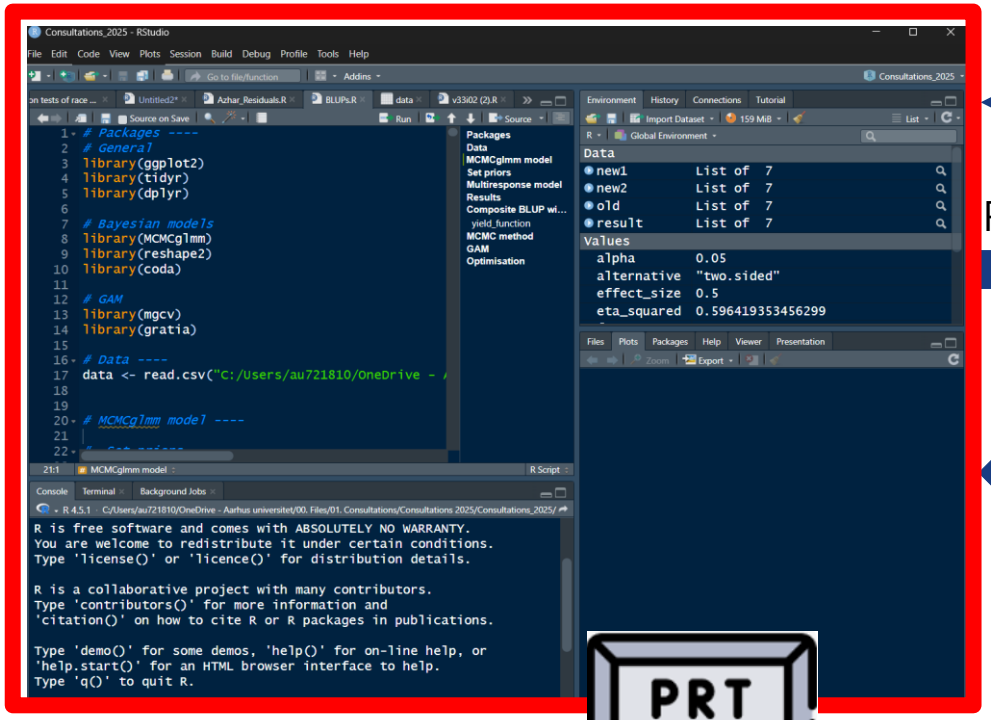

Fetch

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Pull

Commit

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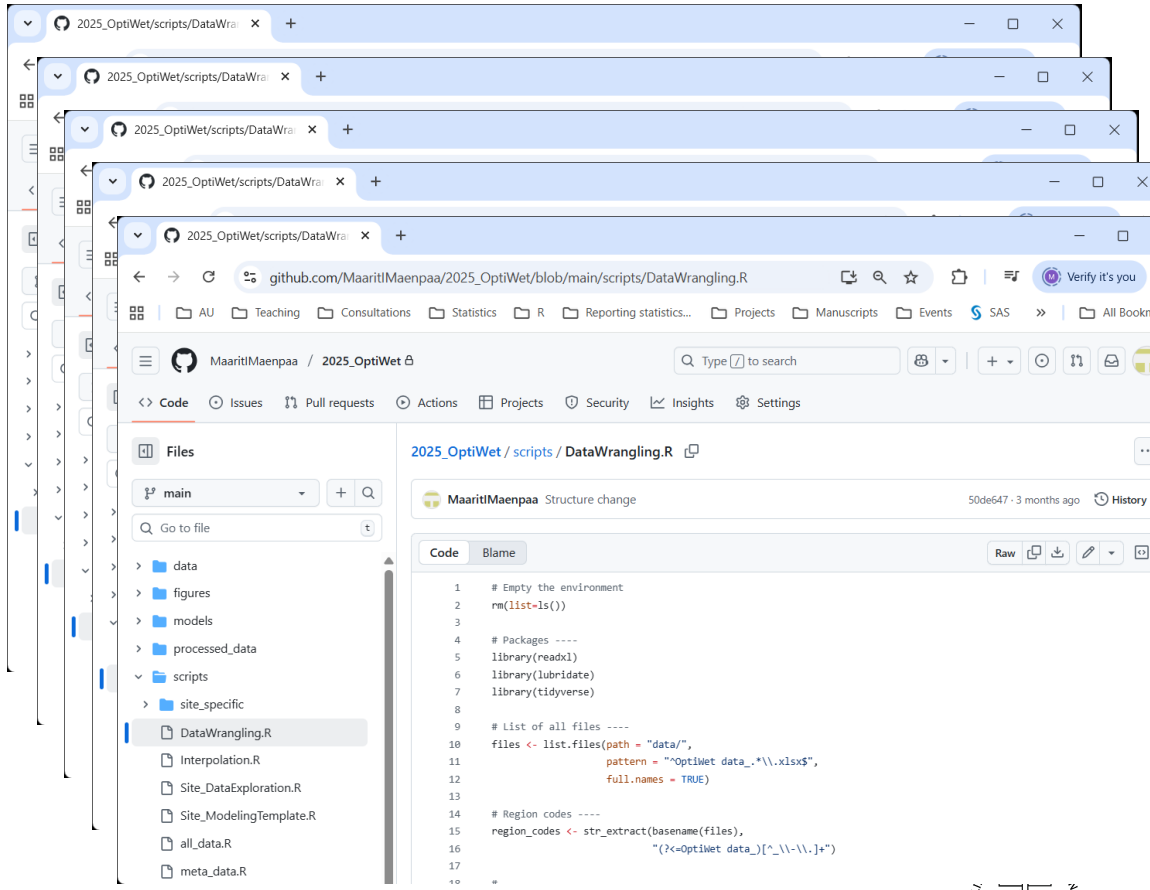

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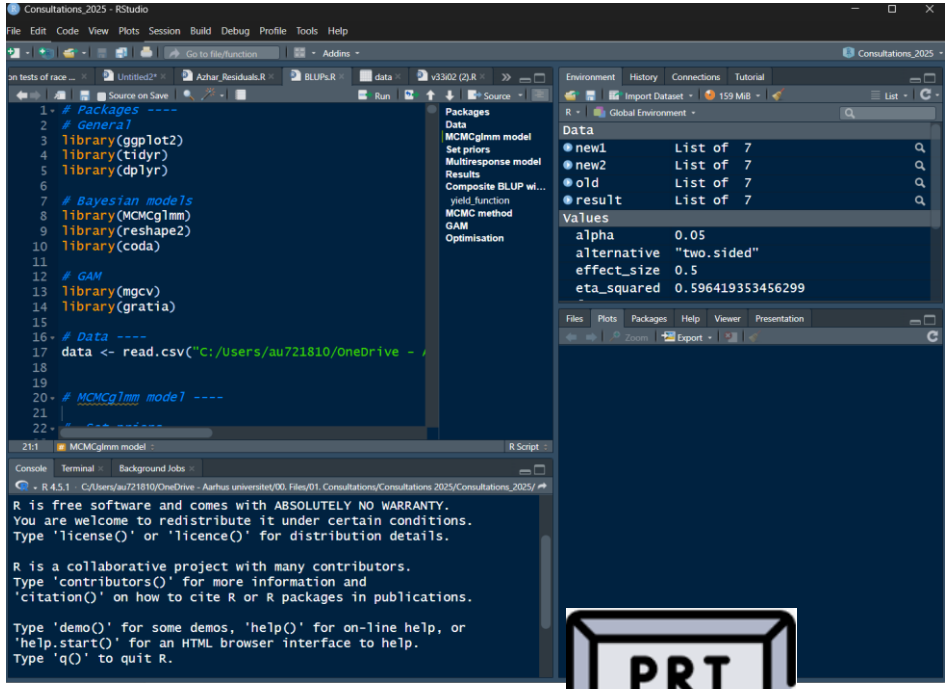

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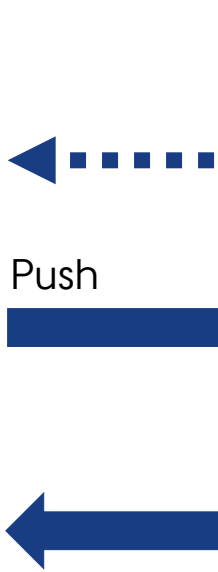
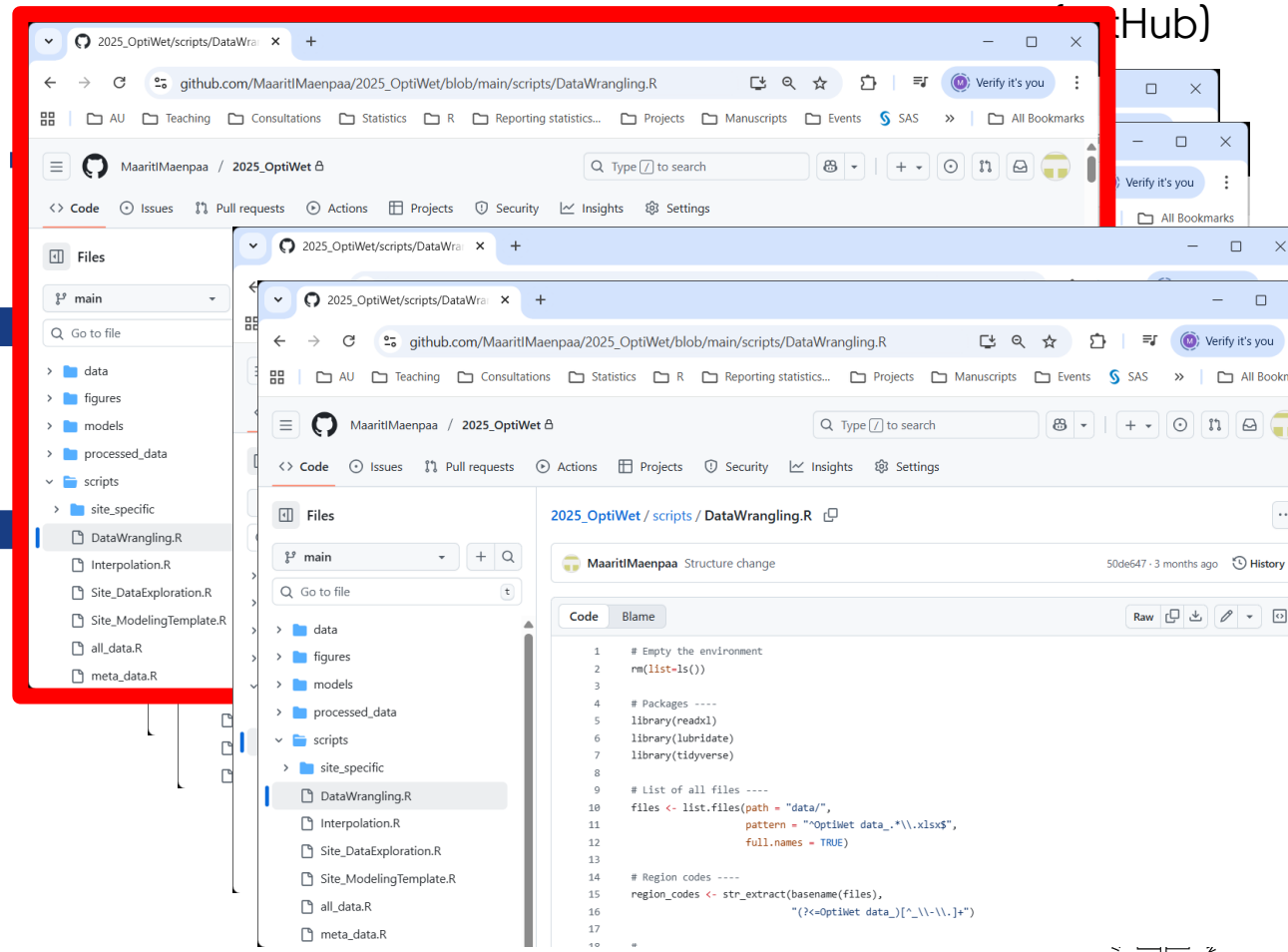


Commit

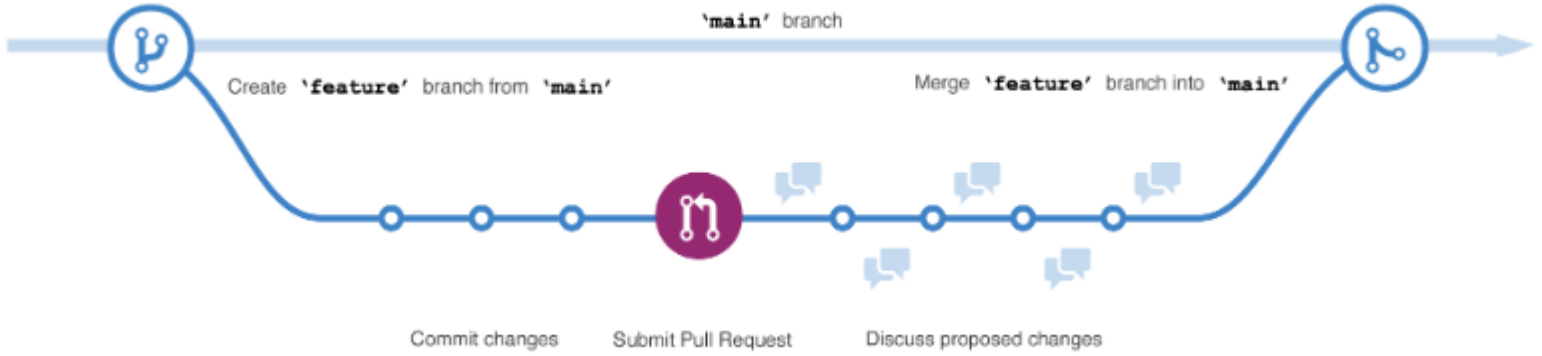
(GitHub)



Vocabulary

Branch A version of your project where you take a different path from the main path. You can separately work on changes without affecting the main branch.

Merge When you determine that your branch changes were the right ones to make, you can merge that branch into your main branch.



Working on a repository: vocabulary

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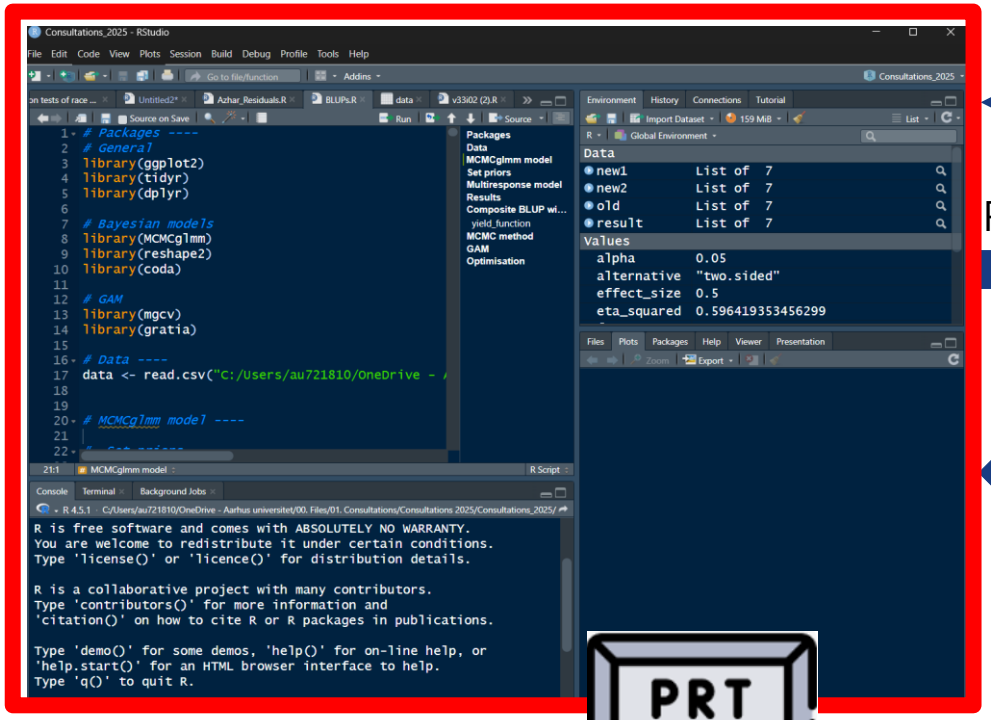


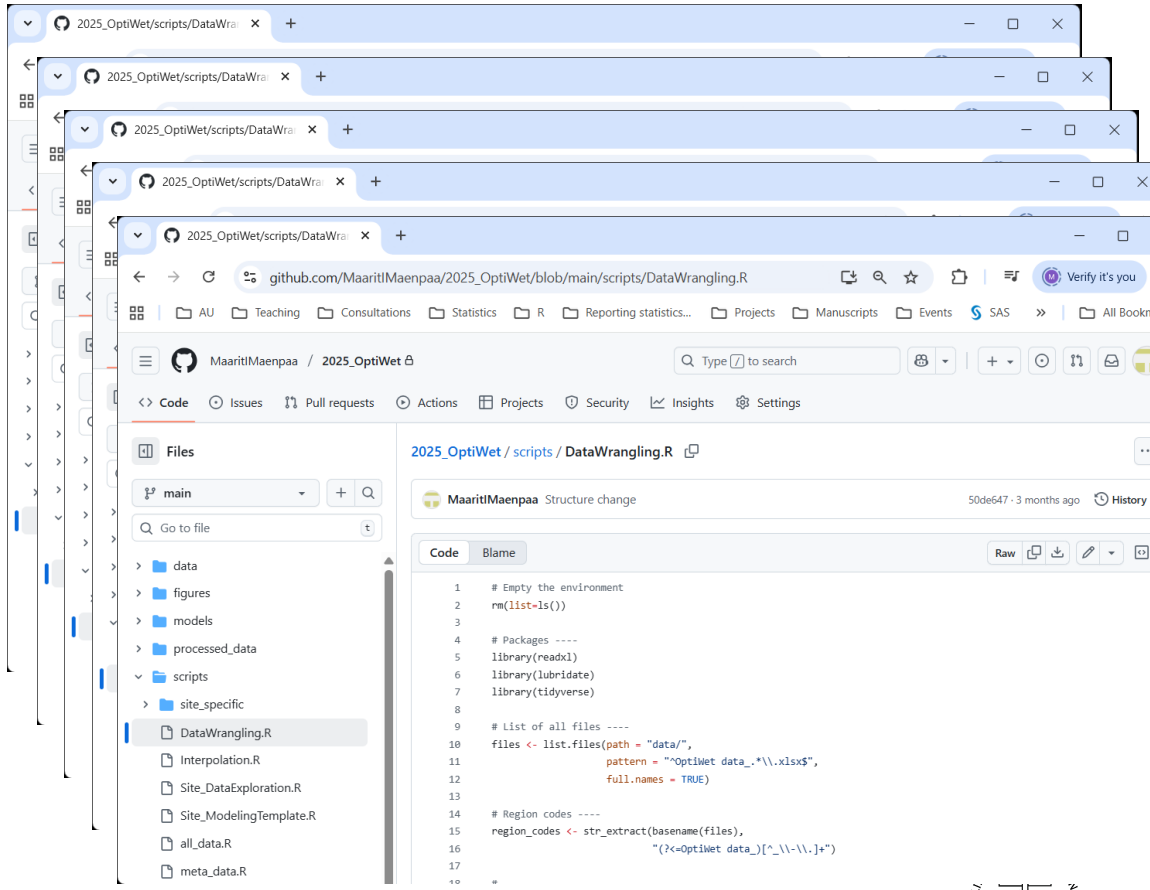
Fetch

Push

Pull

Commit

Code stored in the cloud (GitHub)



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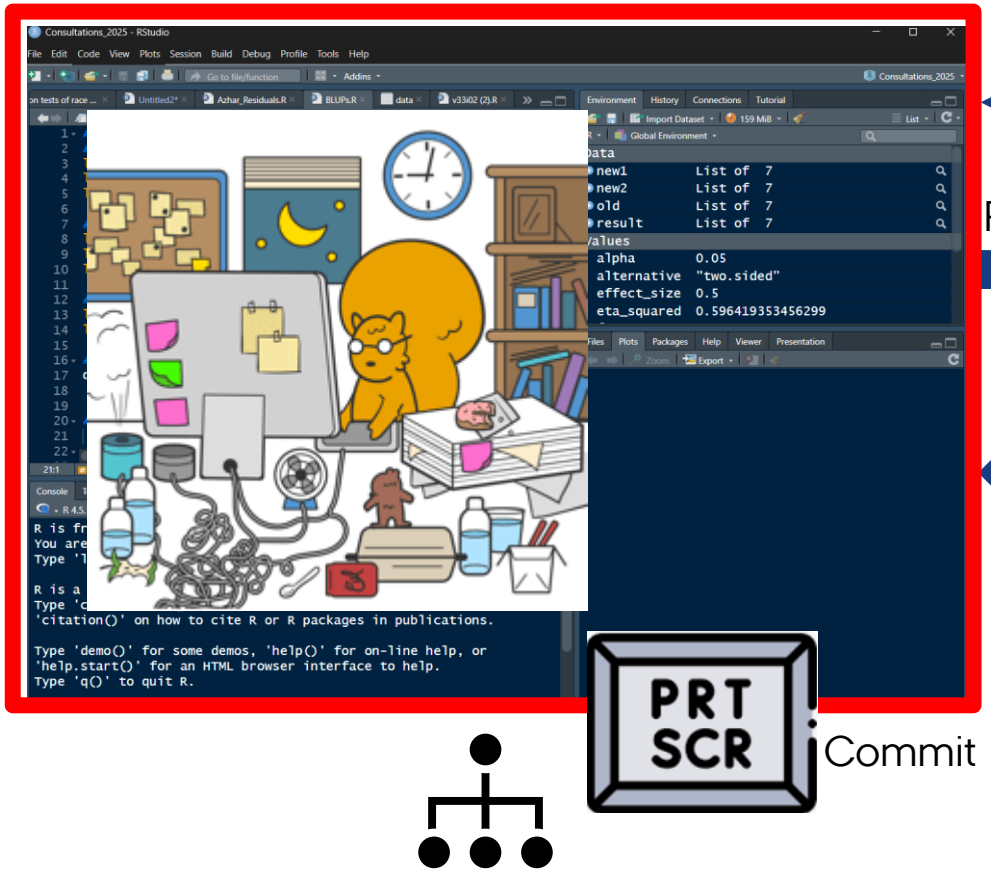


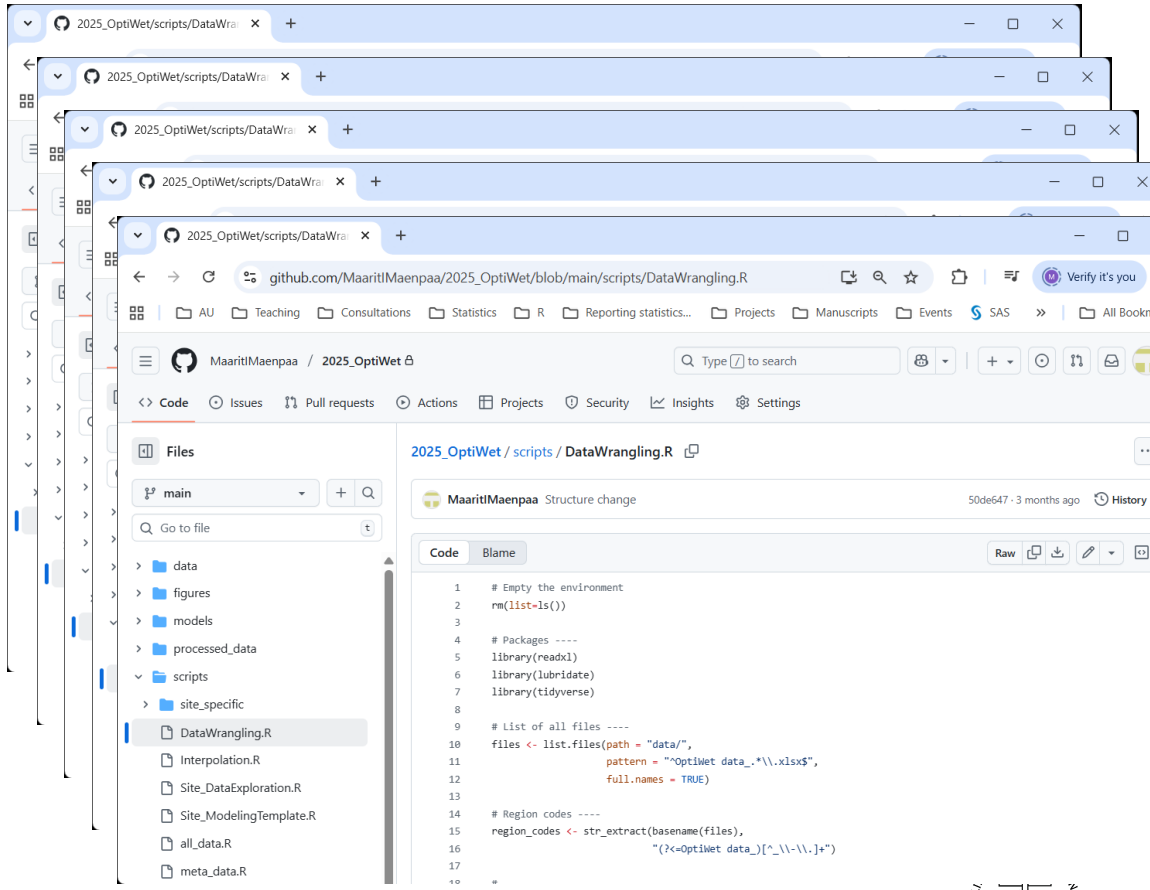
Commit

Fetch

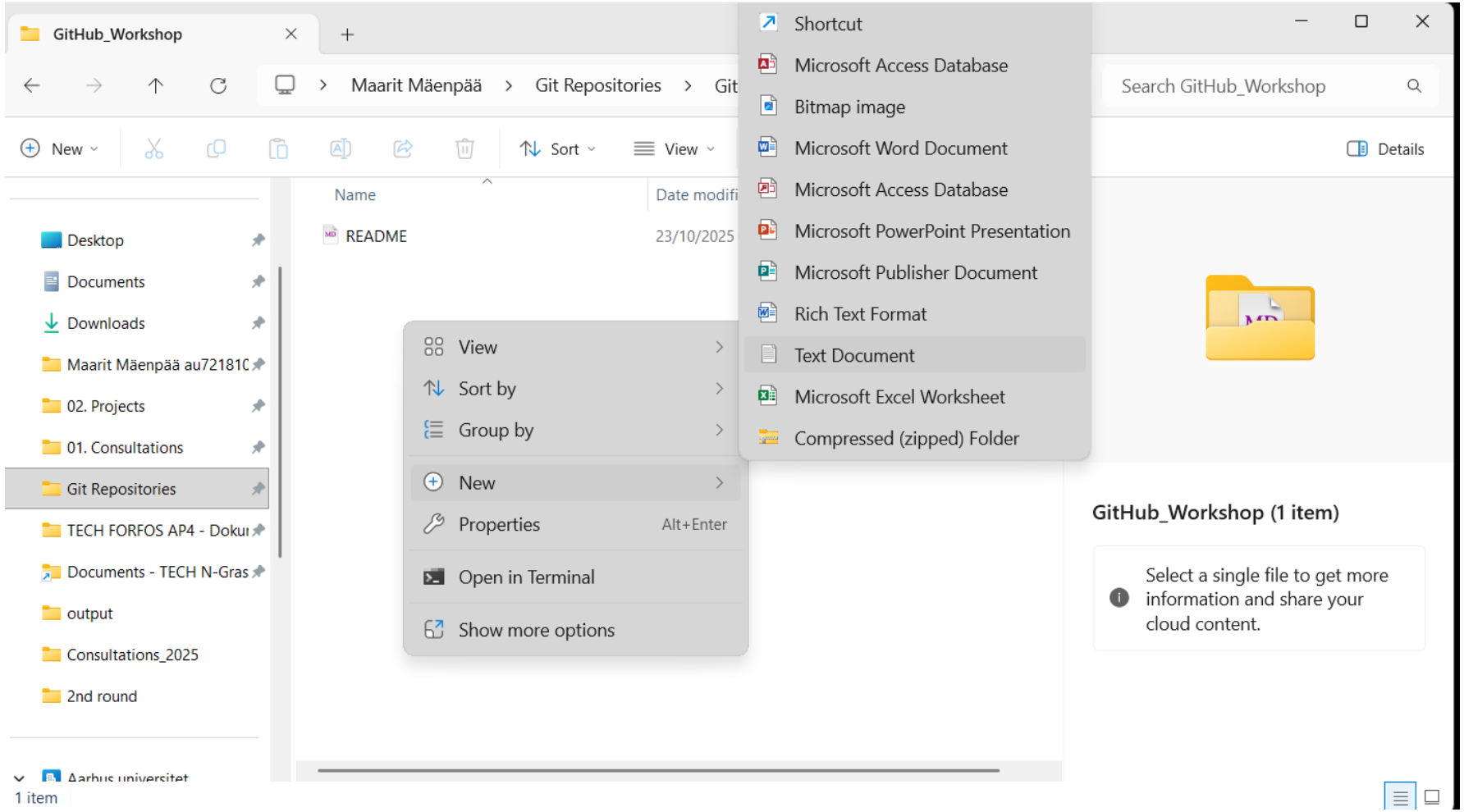
Push

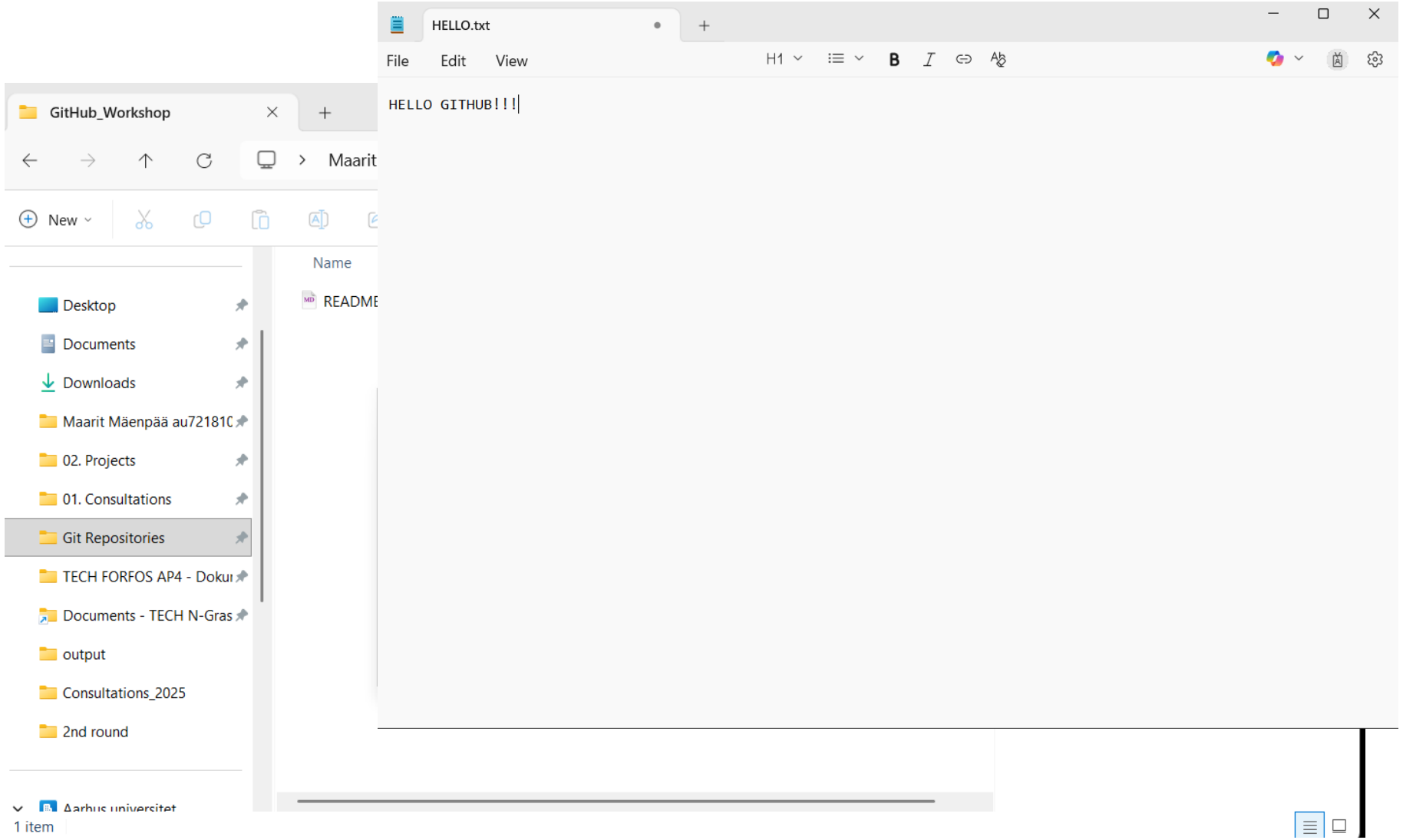
Pull

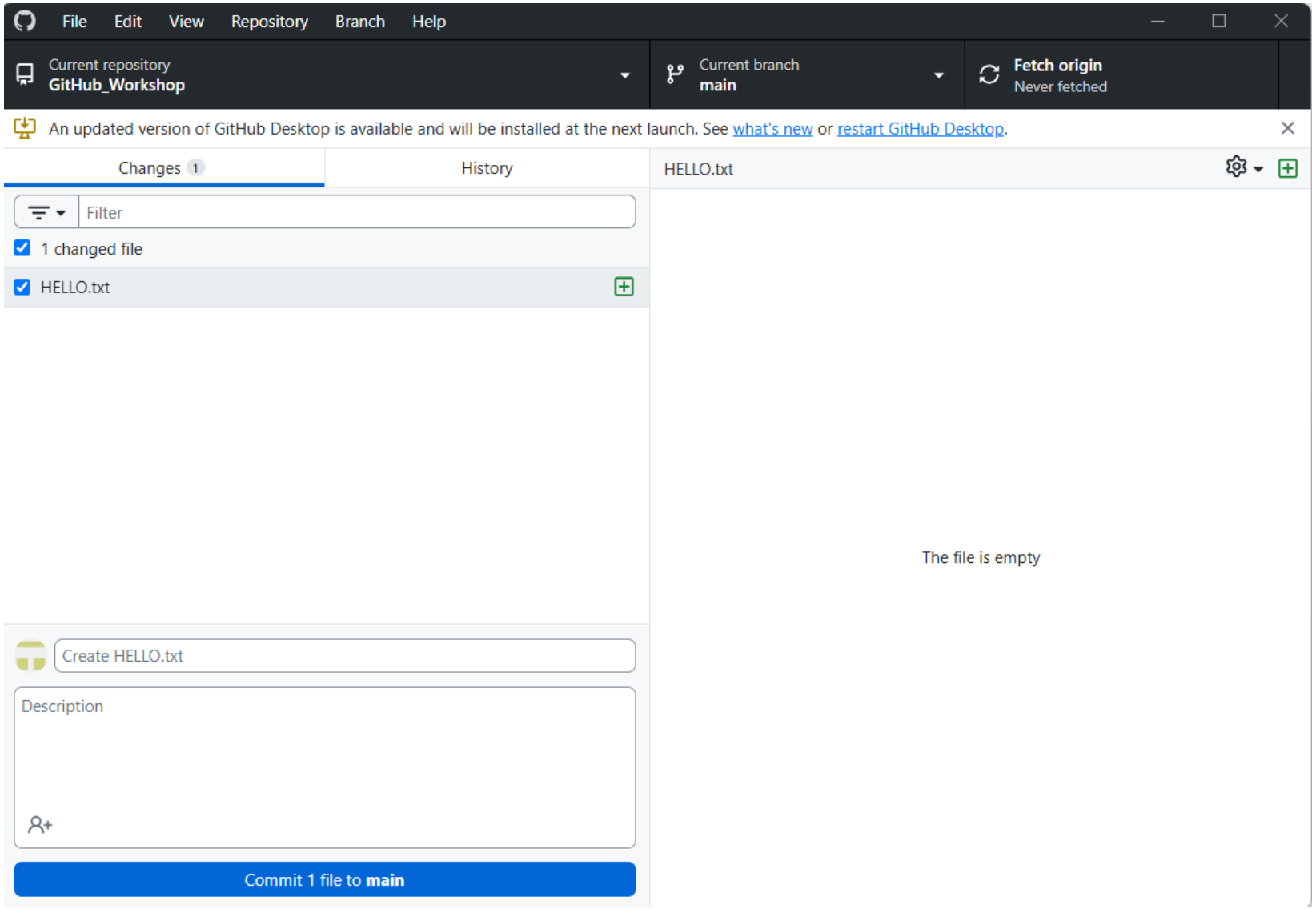
Code stored in the cloud (GitHub)

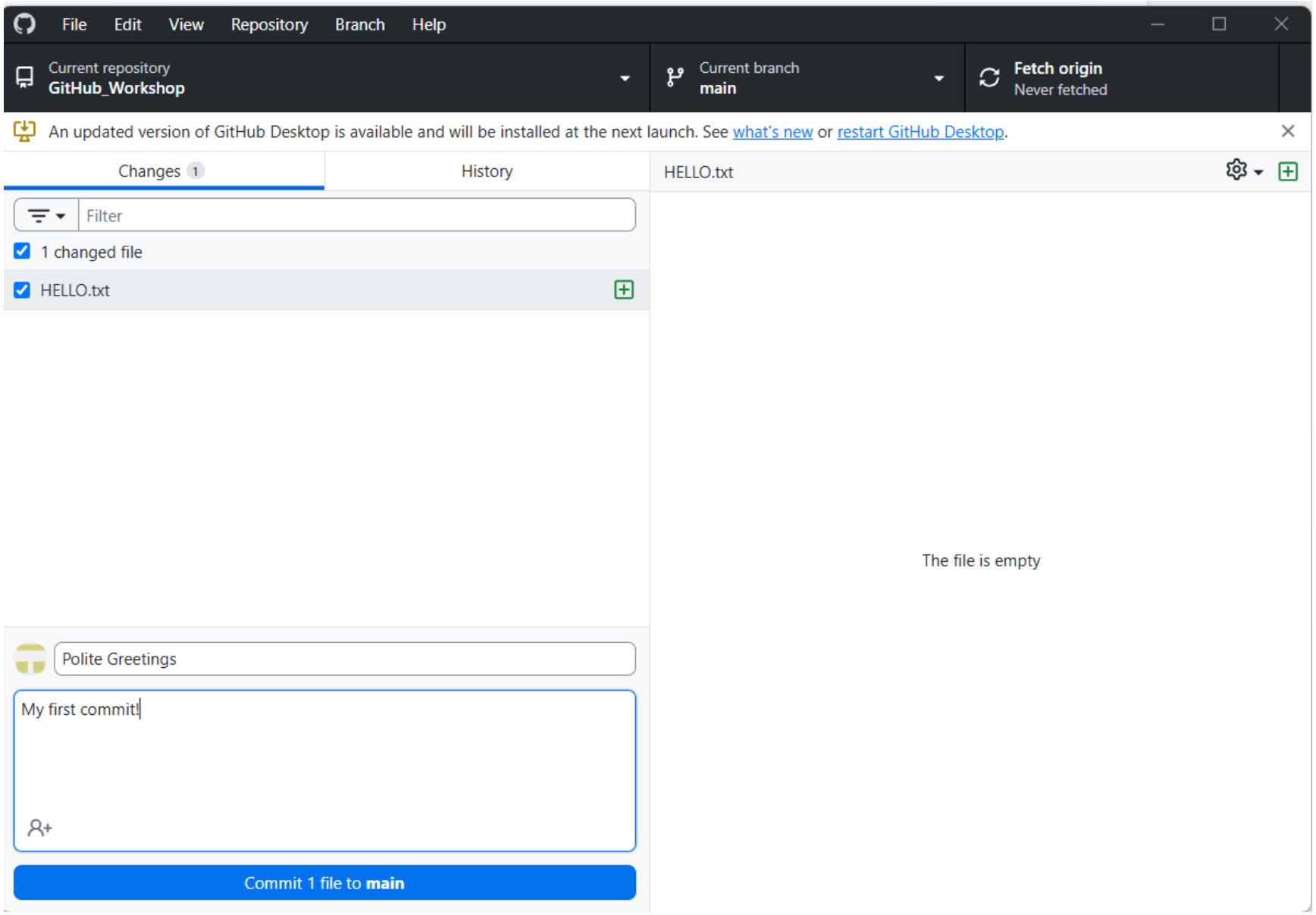


Example of communication between local and cloud repositories


GitHub_Workshop
Maarit Mäenpää
Git Repositories
Search GitHub_Workshop
New
Sort
View
Details
Name
README
23/10/2025
Desktop
Documents
Downloads
Maarit Mäenpää au721810
02. Projects
01. Consultations
Git Repositories
TECH FORFOS AP4 - Doku
Documents - TECH N-Gras
output
Consultations_2025
2nd round
1 item
View
Sort by
Group by
New
Properties
Alt+Enter
Open in Terminal
Show more options
Shortcut
Microsoft Access Database
Bitmap image
Microsoft Word Document
Microsoft Access Database
Microsoft PowerPoint Presentation
Microsoft Publisher Document
Rich Text Format
Text Document
Microsoft Excel Worksheet
Compressed (zipped) Folder
GitHub_Workshop (1 item)
Select a single file to get more information and share your cloud content.


HELLO.txt
File
Edit
View
H1
HELLO GITHUB!!!
GitHub_Workshop
Maarit
New
Name
README
Desktop
Documents
Downloads
Maarit Mäenpää au721810
02. Projects
01. Consultations
Git Repositories
TECH FORFOS AP4 - Doku
Documents - TECH N-Gras
output
Consultations_2025
2nd round
Aarhus universitet
1 item


File
Edit
View
Repository
Branch
Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Never fetched
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes 1
History
HELLO.txt
Filter
1 changed file
HELLO.txt
The file is empty
Create HELLO.txt
Description
Commit 1 file to main


File
Edit
View
Repository
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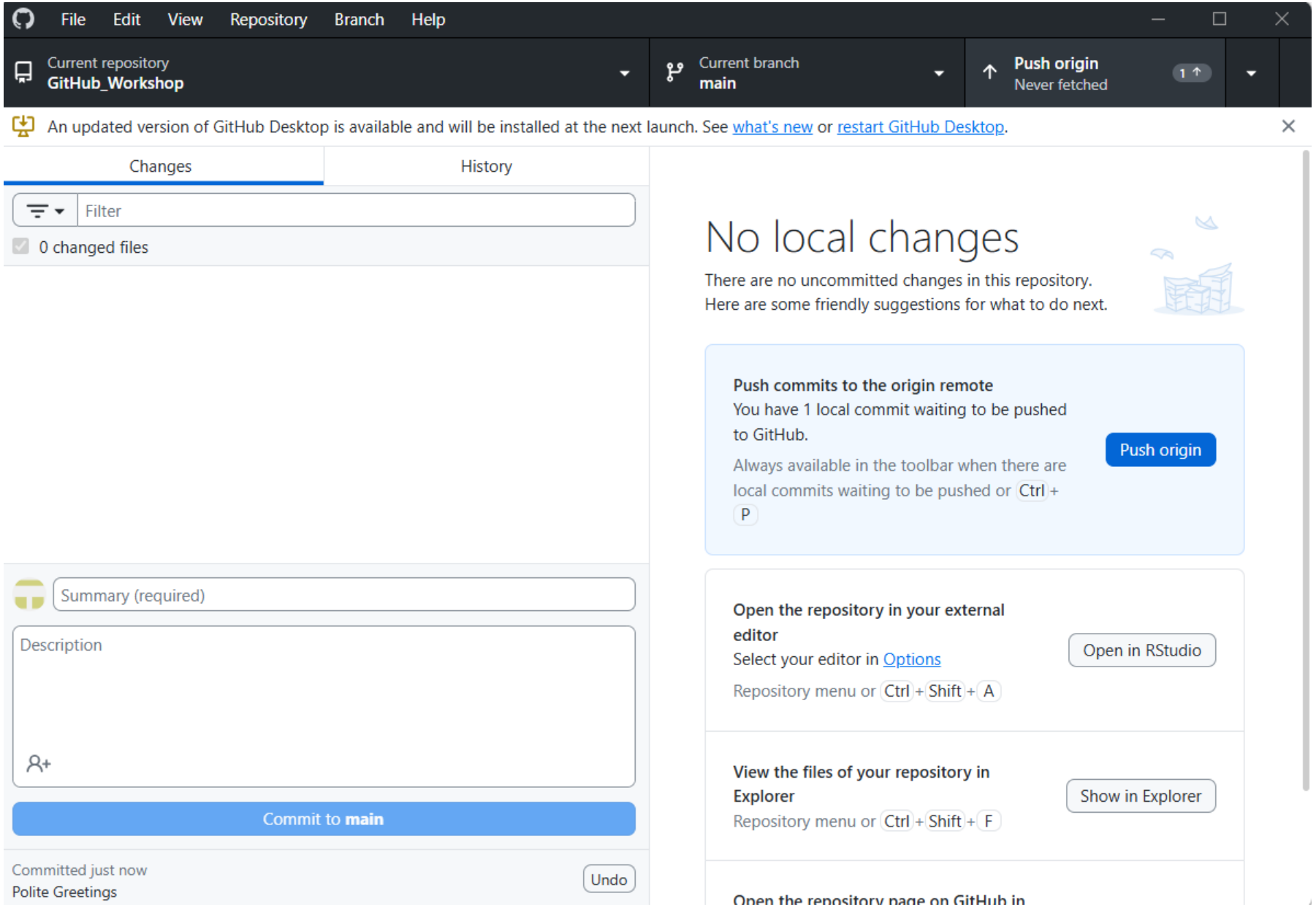
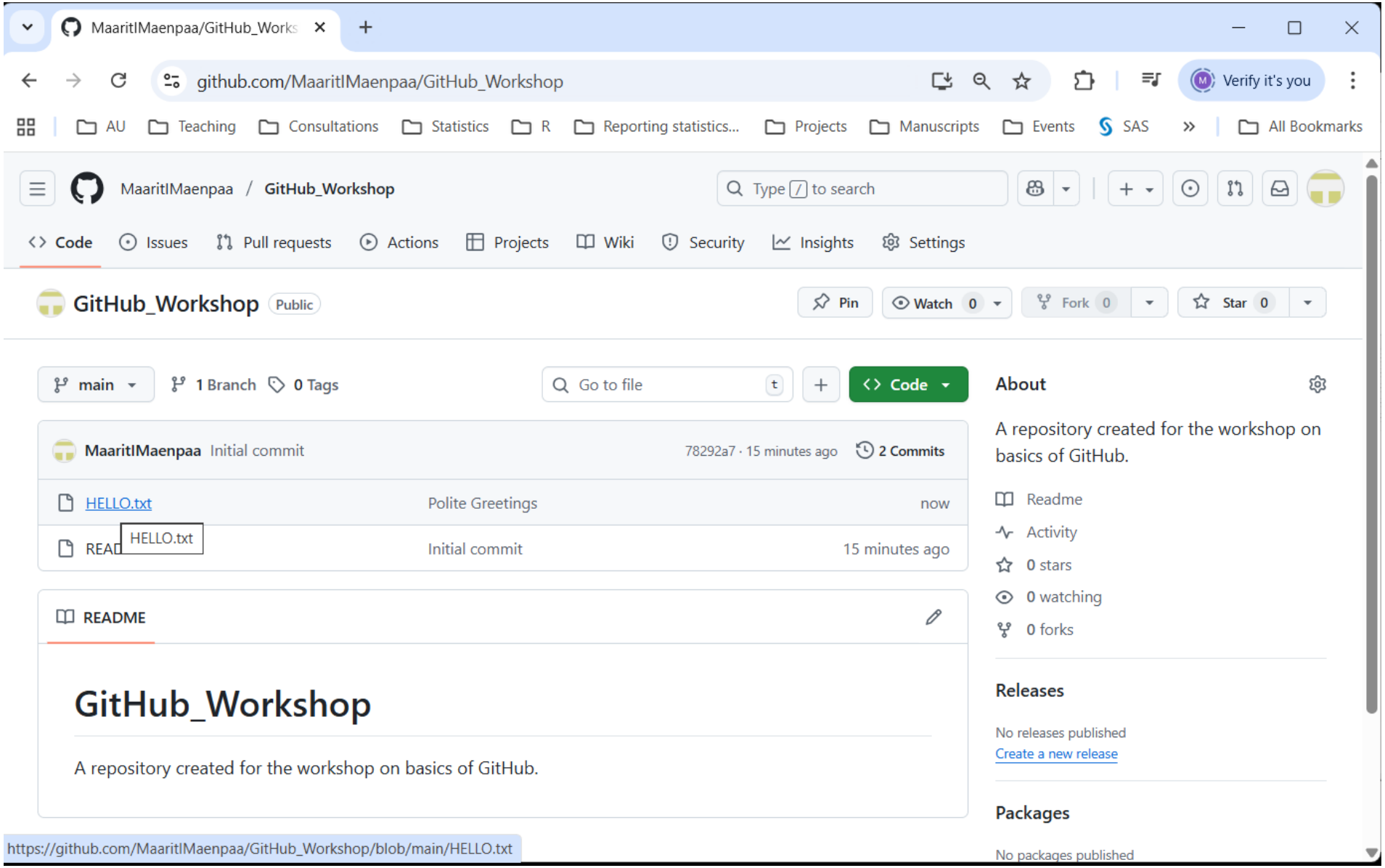
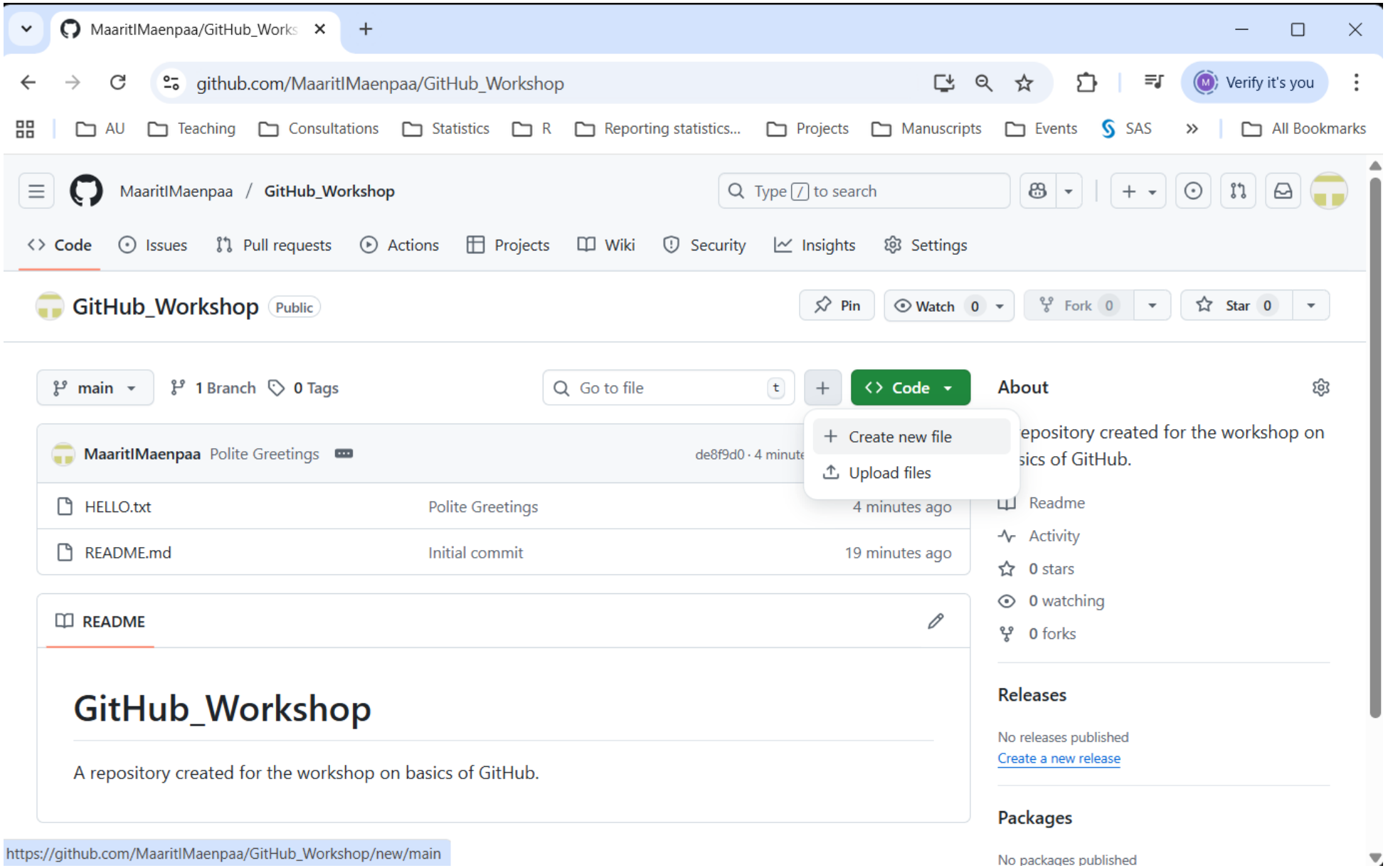
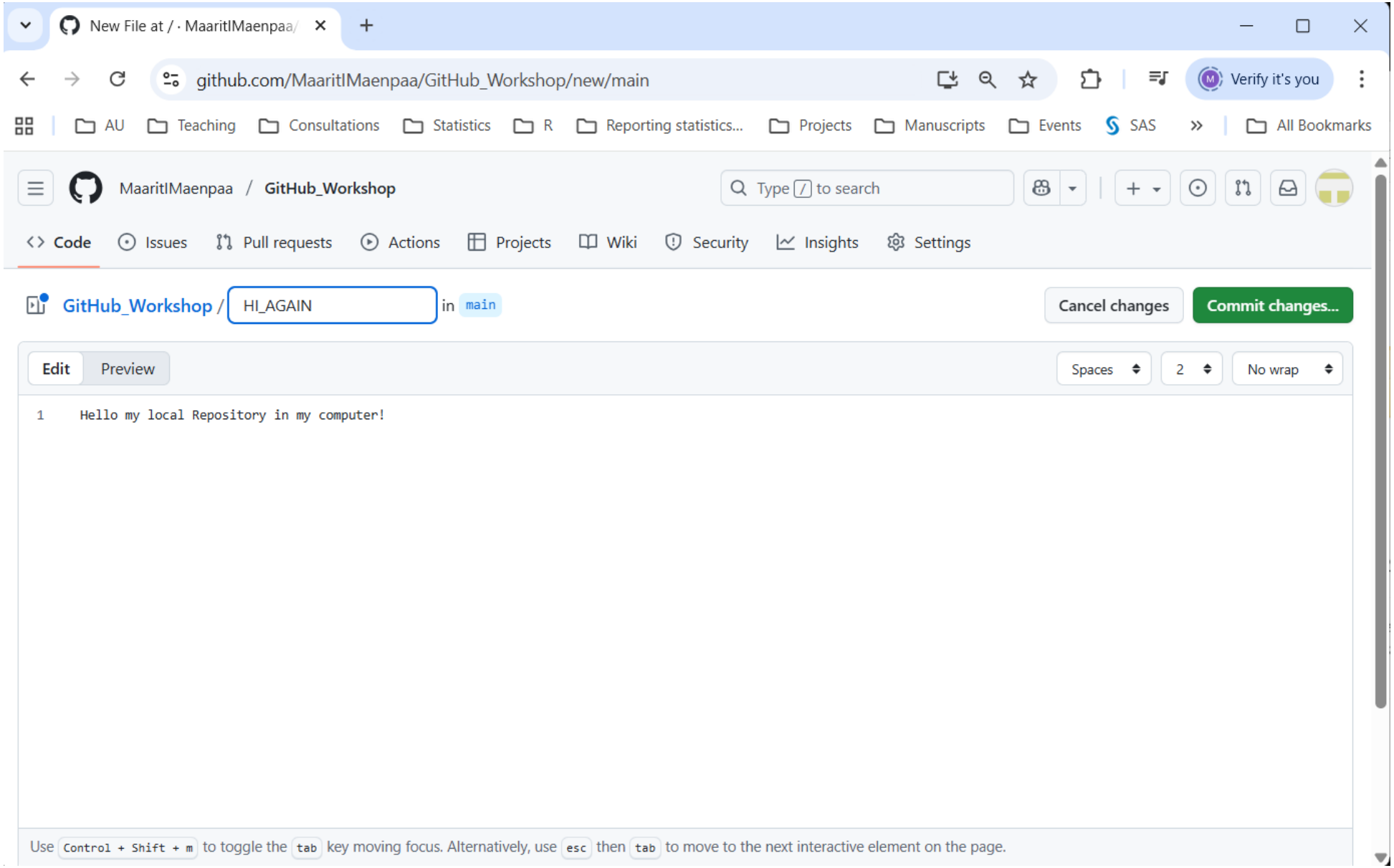
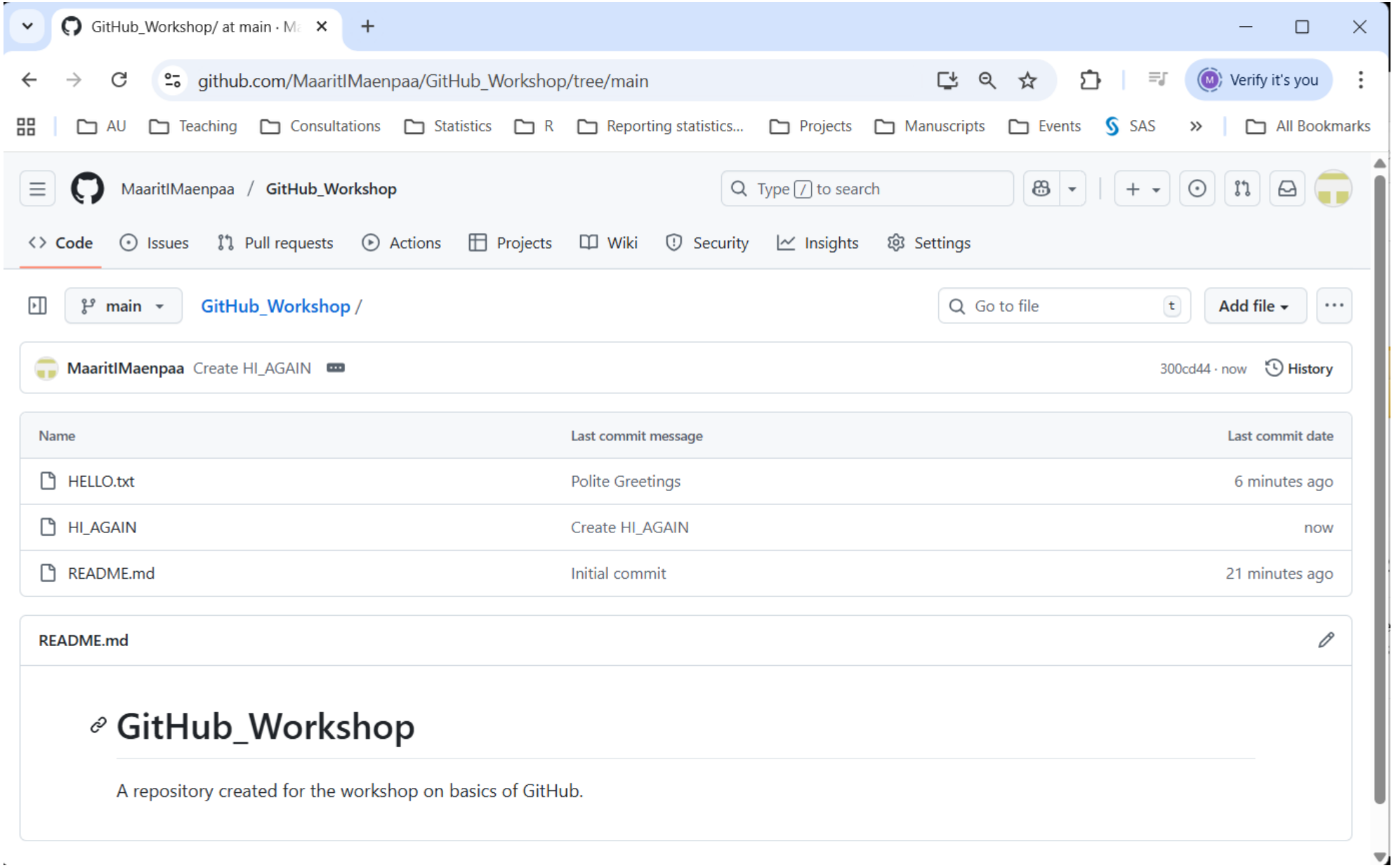
Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Never fetched
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes 1
History
HELLO.txt
Filter
1 changed file
HELLO.txt
The file is empty
Polite Greetings
My first commit!
Commit 1 file to main

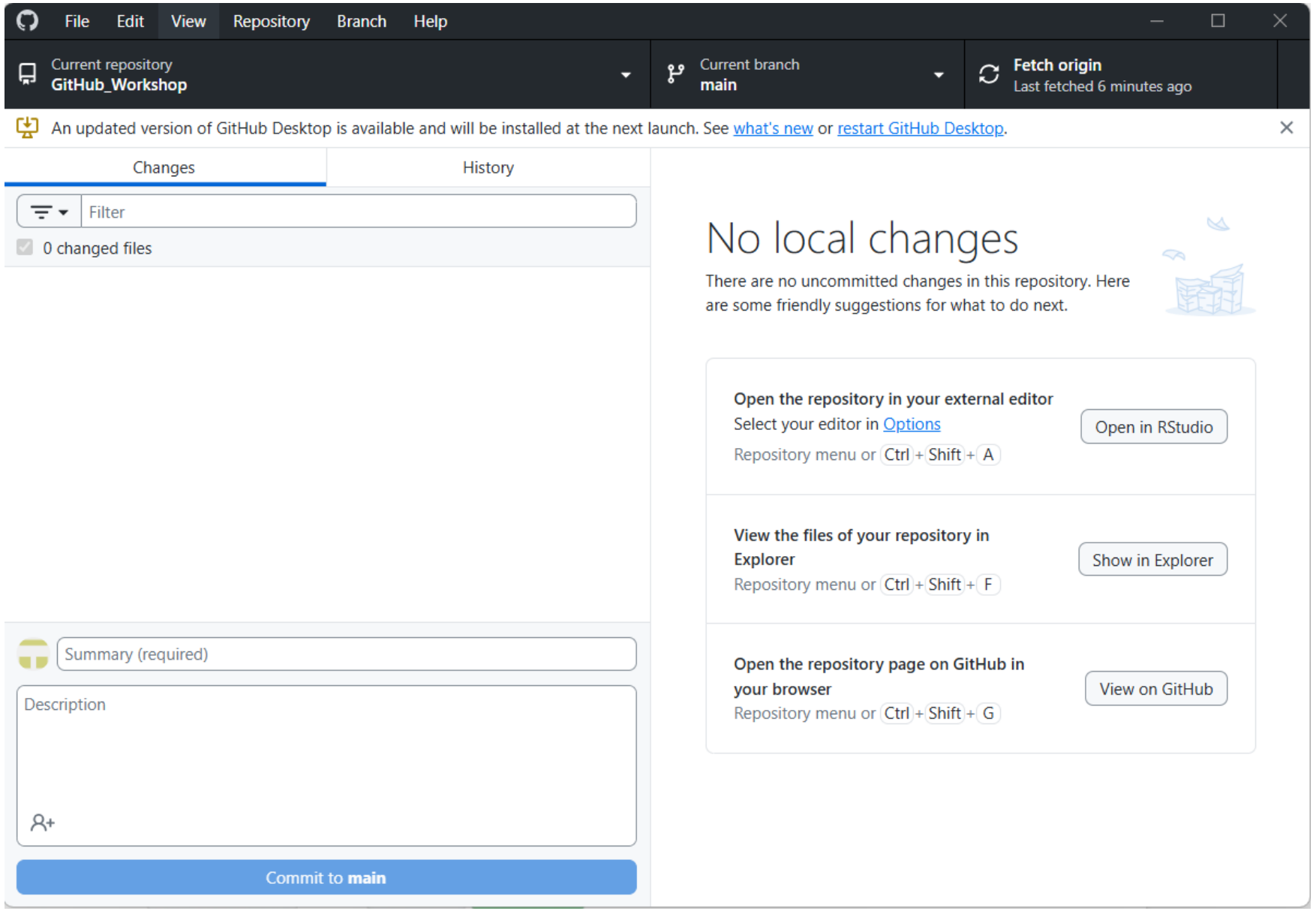

File
Edit
View
Repository
Branch
Help
Current repository
GitHub_Workshop
Current branch
main
Push origin
Never fetched
1
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
Filter
0 changed files
Summary (required)
Description
Commit to main
Committed just now
Polite Greetings
Undo
No local changes
There are no uncommitted changes in this repository.
Here are some friendly suggestions for what to do next.
Push commits to the origin remote
You have 1 local commit waiting to be pushed to GitHub.
Always available in the toolbar when there are local commits waiting to be pushed or Ctrl + P
Push origin
Open the repository in your external editor
Select your editor in Options
Repository menu or Ctrl + Shift + A
Open in RStudio
View the files of your repository in Explorer
Repository menu or Ctrl + Shift + F
Show in Explorer
Open the repository page on GitHub in

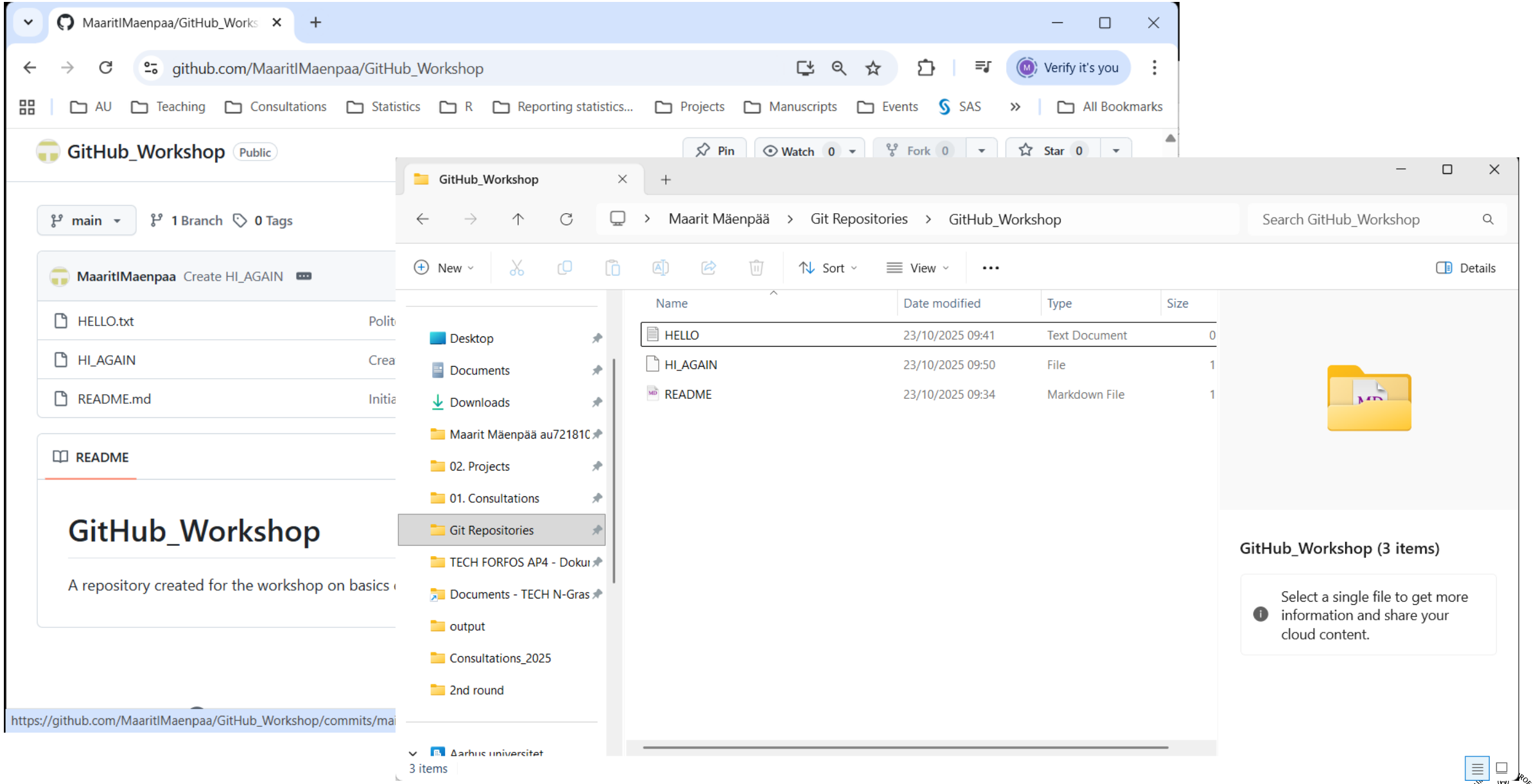

MaaritIMaenpaa/GitHub_Works
github.com/MaaritIMaenpaa/GitHub_Workshop
Verify it's you
AU
Teaching
Consultations
Statistics
R
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
MaaritIMaenpaa / GitHub_Workshop
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
GitHub_Workshop
Public
Pin
Watch 0
Fork 0
Star 0
main
1 Branch
0 Tags
Go to file
t
Code
About
A repository created for the workshop on basics of GitHub.
MaaritIMaenpaa Initial commit
78292a7 · 15 minutes ago
2 Commits
HELLO.txt
Polite Greetings
now
HELLO.txt
READ
Initial commit
15 minutes ago
Readme
Activity
0 stars
0 watching
0 forks
README
GitHub_Workshop
A repository created for the workshop on basics of GitHub.
Releases
No releases published
Create a new release
Packages
No packages published
https://github.com/MaaritIMaenpaa/GitHub_Workshop/blob/main/HELLO.txt

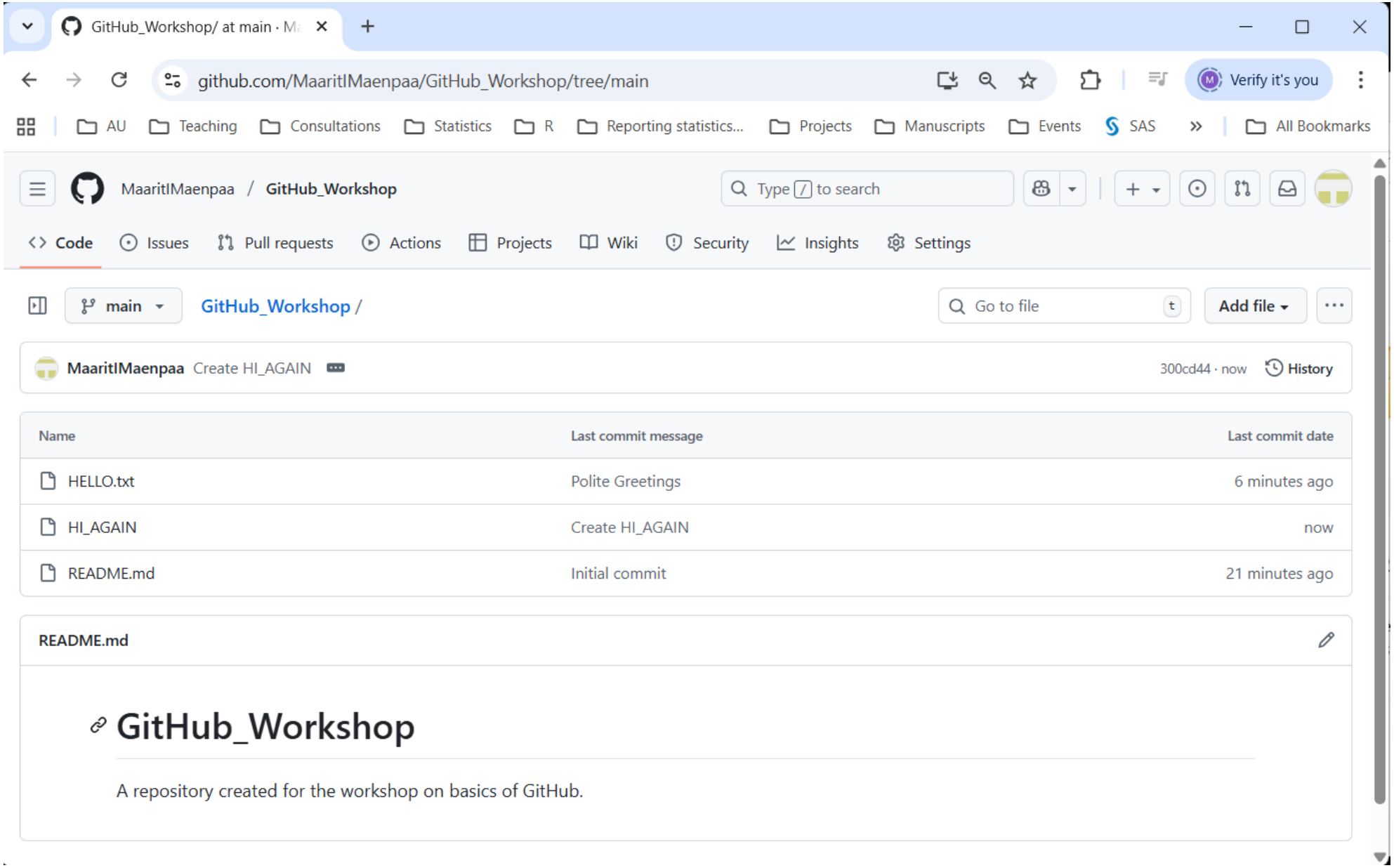

MaaritIMaenpaa/GitHub_Works
github.com/MaaritIMaenpaa/GitHub_Workshop
Verify it's you
AU
Teaching
Consultations
Statistics
R
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
MaaritIMaenpaa / GitHub_Workshop
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
GitHub_Workshop
Public
Pin
Watch 0
Fork 0
Star 0
main
1 Branch
0 Tags
Go to file
t
Code
Create new file
Upload files
MaaritIMaenpaa Polite Greetings
de8f9d0 · 4 minute
HELLO.txt
Polite Greetings
4 minutes ago
README.md
Initial commit
19 minutes ago
README
GitHub_Workshop
A repository created for the workshop on basics of GitHub.
About
epository created for the workshop on
sics of GitHub.
Readme
Activity
0 stars
0 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
https://github.com/MaaritIMaenpaa/GitHub_Workshop/new/main


New File at / · MaaritIMaenpaa/
github.com/MaaritIMaenpaa/GitHub_Workshop/new/main
Verify it's you
AU
Teaching
Consultations
Statistics
R
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
MaaritIMaenpaa / GitHub_Workshop
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
GitHub_Workshop / HI_AGAIN in main
Cancel changes
Commit changes...
Edit
Preview
Spaces
2
No wrap
1 Hello my local Repository in my computer!
Use Control + Shift + m to toggle the tab key moving focus. Alternatively, use esc then tab to move to the next interactive element on the page.


GitHub_Workshop/ at main · Ma
github.com/MaaritIMaenpaa/GitHub_Workshop/tree/main
Verify it's you
AU
Teaching
Consultations
Statistics
R
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
MaaritIMaenpaa / GitHub_Workshop
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
GitHub_Workshop /
Go to file
t
Add file
MaaritIMaenpaa Create HI_AGAIN
300cd44 · now
History
Name
Last commit message
Last commit date
HELLO.txt
Polite Greetings
6 minutes ago
HI_AGAIN
Create HI_AGAIN
now
README.md
Initial commit
21 minutes ago
README.md
GitHub_Workshop
A repository created for the workshop on basics of GitHub.


File
Edit
View
Repository
Branch
Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Last fetched 6 minutes ago
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
Filter
0 changed files
Summary (required)
Description
Commit to main
No local changes
There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.
Open the repository in your external editor
Select your editor in Options
Repository menu or Ctrl + Shift + A
Open in RStudio
View the files of your repository in Explorer
Repository menu or Ctrl + Shift + F
Show in Explorer
Open the repository page on GitHub in your browser
Repository menu or Ctrl + Shift + G
View on GitHub


MaaritIMaenpaa/GitHub_Works
github.com/MaaritIMaenpaa/GitHub_Workshop
Verify it's you
AU
Teaching
Consultations
Statistics
R
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
GitHub_Workshop
Public
Pin
Watch 0
Fork 0
Star 0
main
1 Branch
0 Tags
MaaritIMaenpaa Create HI_AGAIN
HELLO.txt
HI_AGAIN
README.md
README
GitHub_Workshop
A repository created for the workshop on basics
https://github.com/MaaritIMaenpaa/GitHub_Workshop/commits/mai
GitHub_Workshop
Maarit Mäenpää
Git Repositories
GitHub_Workshop
Search GitHub_Workshop
New
Sort
View
Details
Desktop
Documents
Downloads
Maarit Mäenpää au721810
02. Projects
01. Consultations
Git Repositories
TECH FORFOS AP4 - Doku
Documents - TECH N-Gras
output
Consultations_2025
2nd round
Aarhus universitet
3 items
Name
Date modified
Type
Size
HELLO
23/10/2025 09:41
Text Document
0
HI_AGAIN
23/10/2025 09:50
File
1
README
23/10/2025 09:34
Markdown File
1
GitHub_Workshop (3 items)
Select a single file to get more information and share your cloud content.


GitHub_Workshop/ at main · Ma
github.com/MaaritIMaenpaa/GitHub_Workshop/tree/main
Verify it's you
AU
Teaching
Consultations
Statistics
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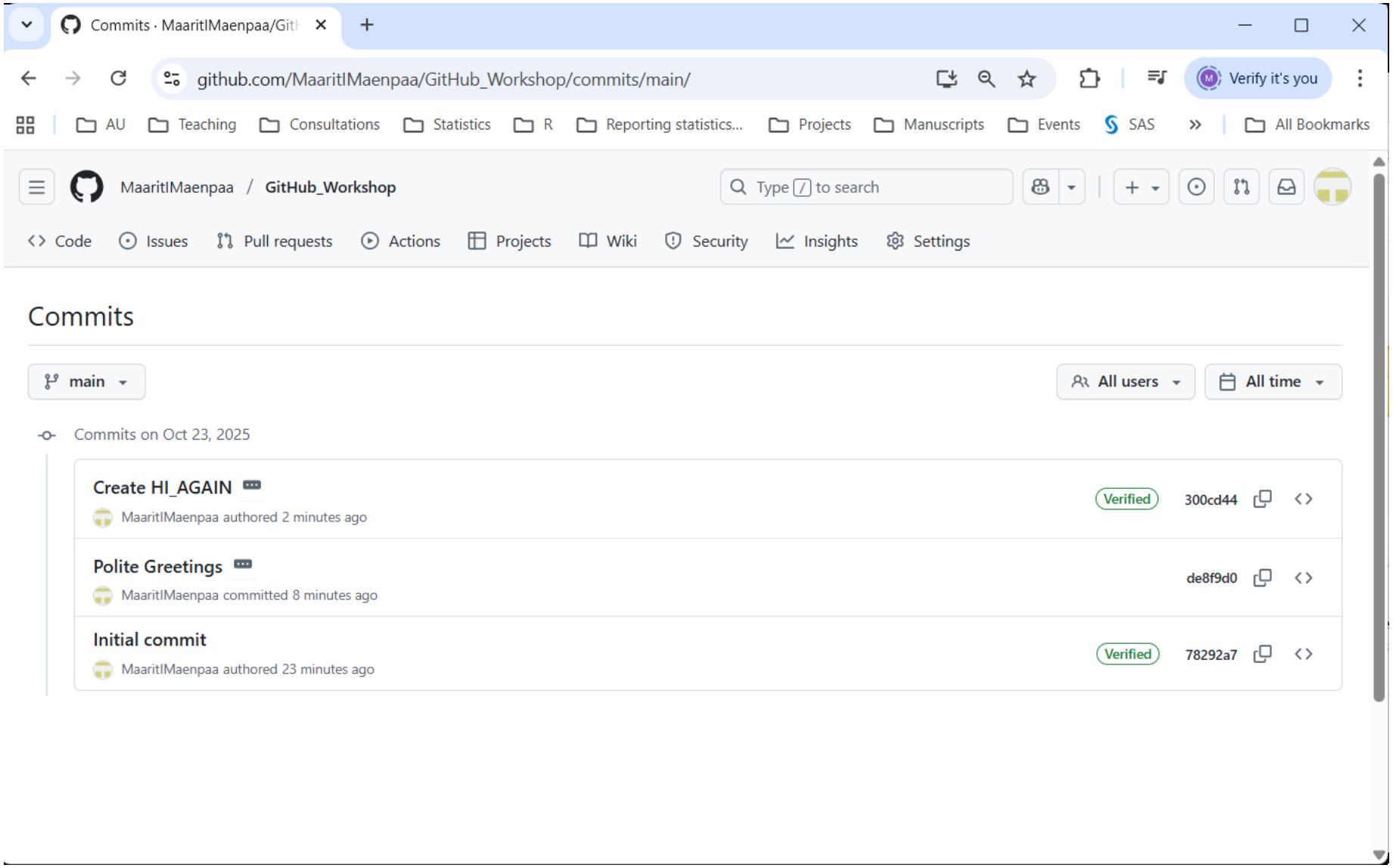
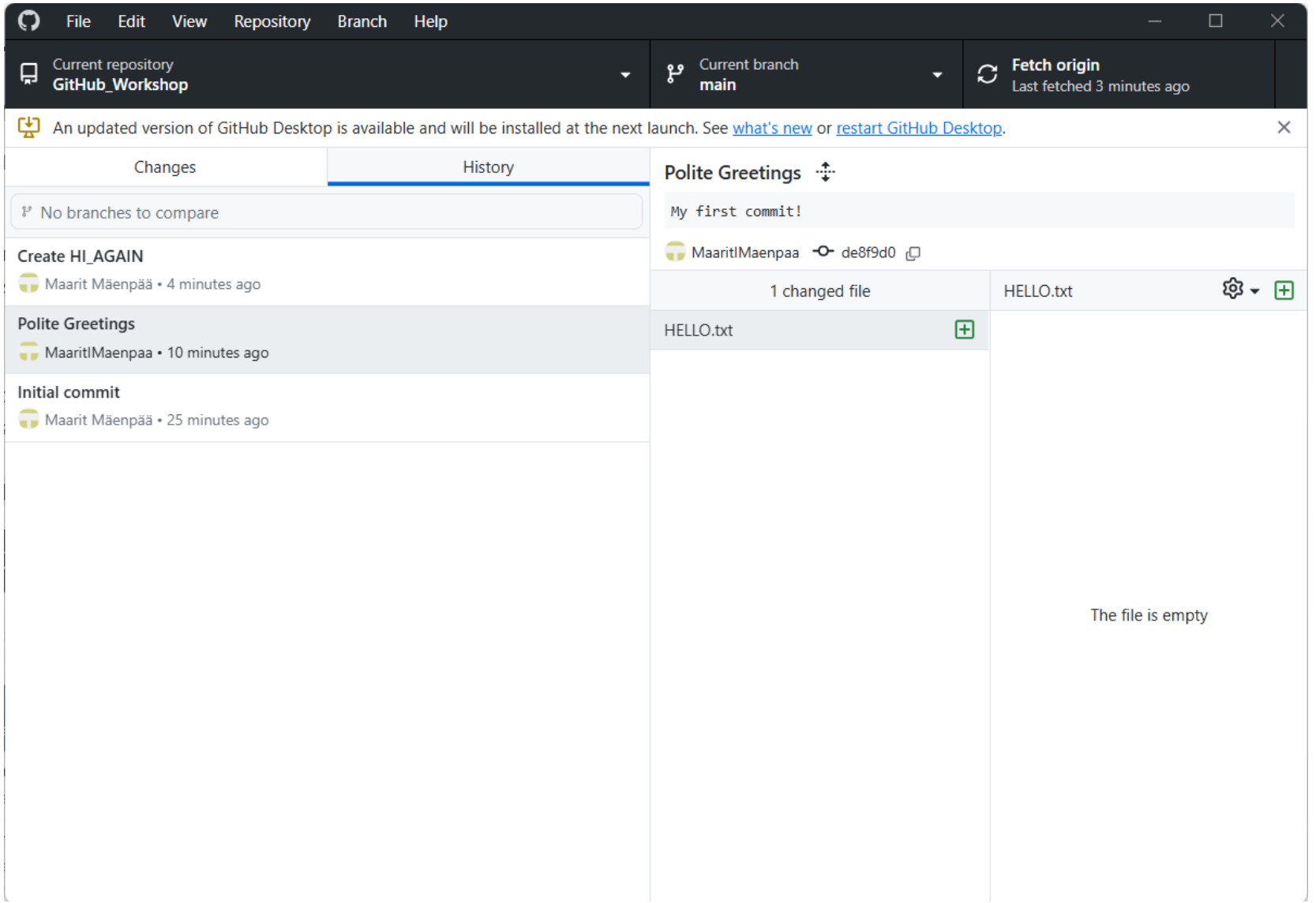
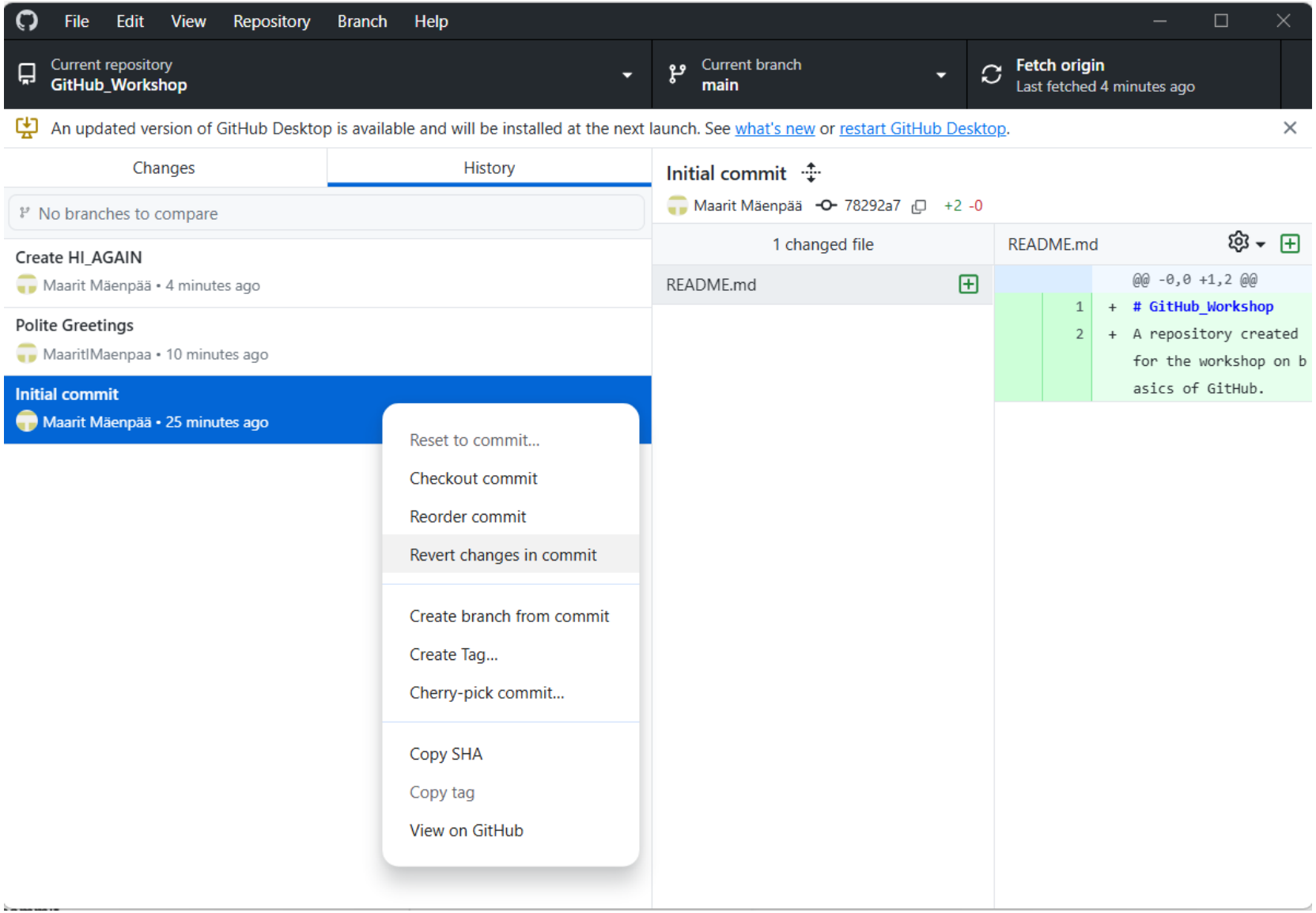
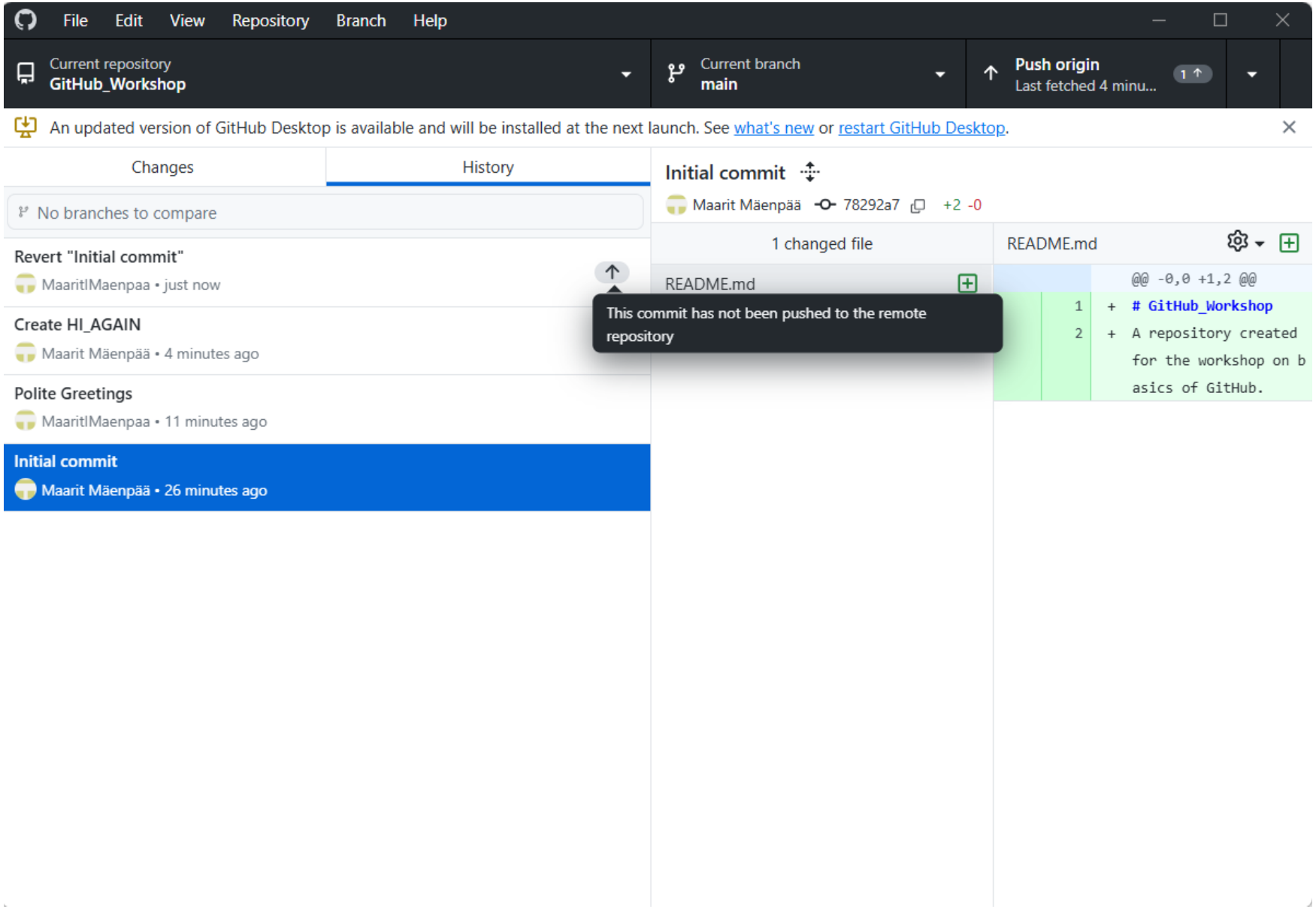
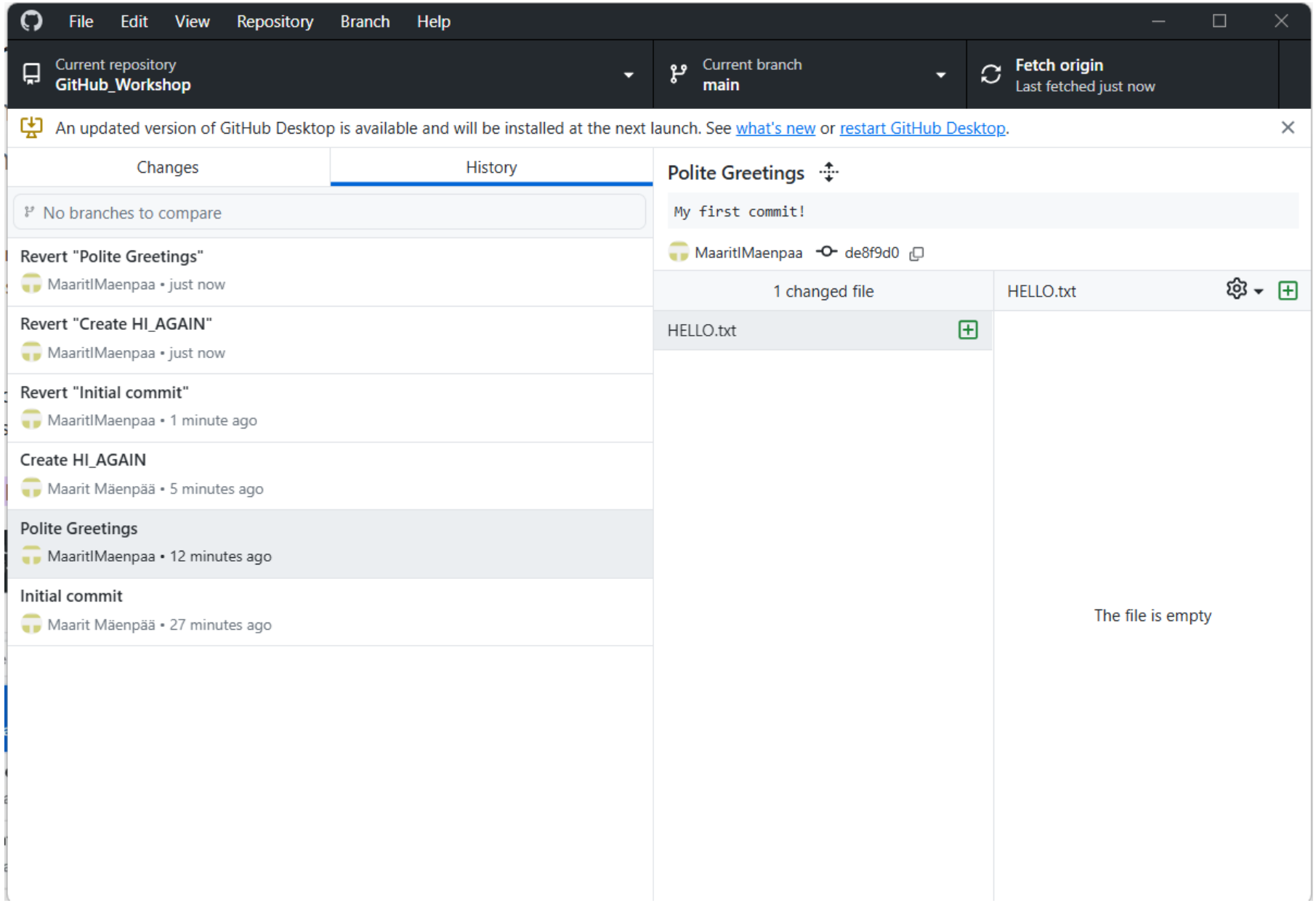
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
MaaritIMaenpaa / GitHub_Workshop
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
main
GitHub_Workshop /
Go to file
t
Add file
MaaritIMaenpaa Create HI_AGAIN
300cd44 · now
History
Name
Last commit message
Last commit date
HELLO.txt
Polite Greetings
6 minutes ago
HI_AGAIN
Create HI_AGAIN
now
README.md
Initial commit
21 minutes ago
README.md
GitHub_Workshop
A repository created for the workshop on basics of GitHub.

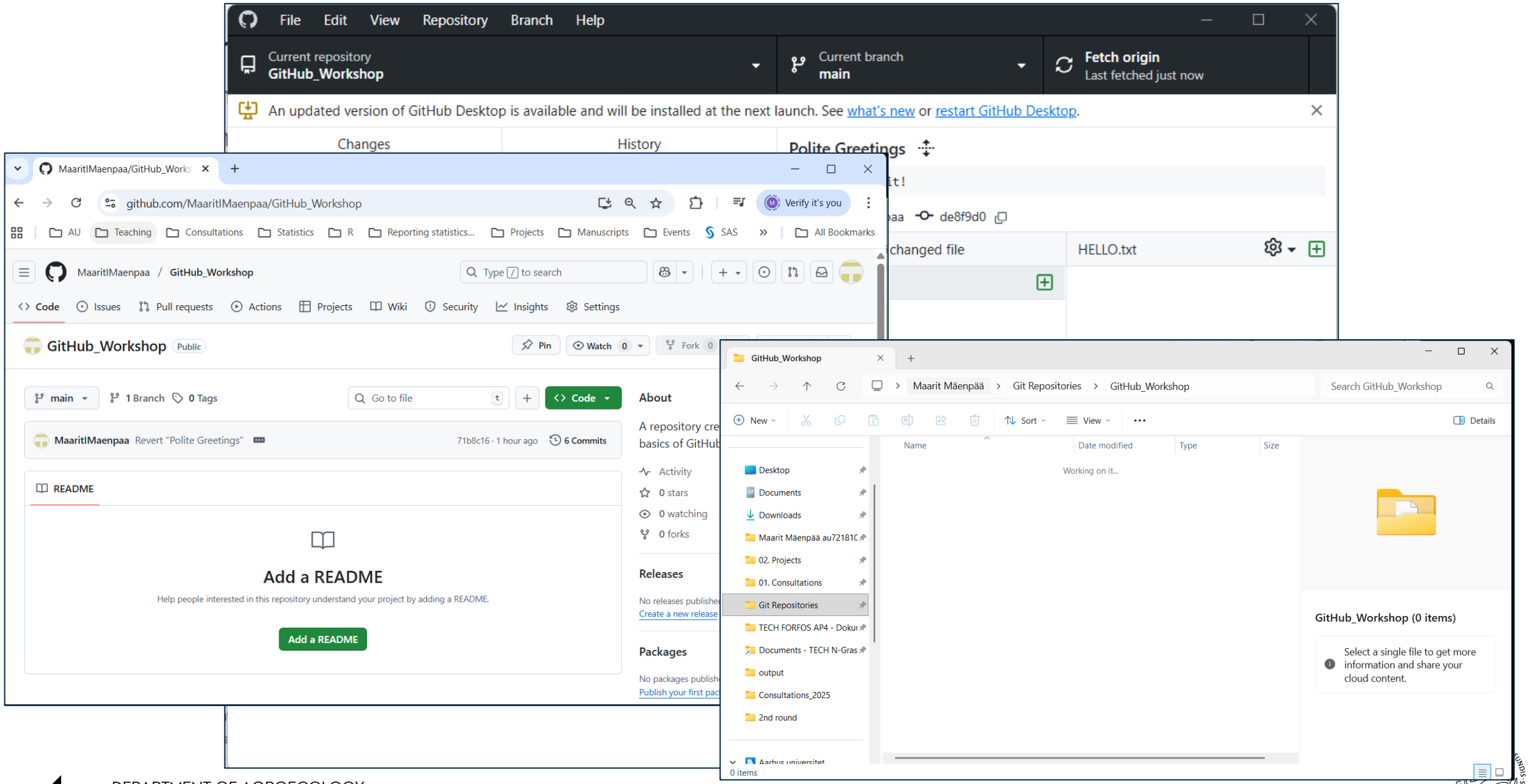

Commits · MaaritlMaenpaa/Git
github.com/MaaritlMaenpaa/GitHub_Workshop/commits/main/
Verify it's you
AU
Teaching
Consultations
Statistics
R
Reporting statistics...
Projects
Manuscripts
Events
SAS
All Bookmarks
MaaritlMaenpaa / GitHub_Workshop
Type / to search
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Commits
main
All users
All time
Commits on Oct 23, 2025
Create HI_AGAIN
MaaritlMaenpaa authored 2 minutes ago
Verified
300cd44
Polite Greetings
MaaritlMaenpaa committed 8 minutes ago
de8f9d0
Initial commit
MaaritlMaenpaa authored 23 minutes ago
Verified
78292a7


File
Edit
View
Repository
Branch
Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Last fetched 3 minutes ago
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
No branches to compare
Create HI_AGAIN
Maarit Mäenpää • 4 minutes ago
Polite Greetings
MaaritlMaenpaa • 10 minutes ago
Initial commit
Maarit Mäenpää • 25 minutes ago
Polite Greetings
My first commit!
MaaritlMaenpaa
de8f9d0
1 changed file
HELLO.txt
HELLO.txt
The file is empty


File
Edit
View
Repository
Branch
Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Last fetched 4 minutes ago
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
No branches to compare
Create HI_AGAIN
Maarit Mäenpää • 4 minutes ago
Polite Greetings
MaaritIMaenpaa • 10 minutes ago
Initial commit
Maarit Mäenpää • 25 minutes ago
Reset to commit...
Checkout commit
Reorder commit
Revert changes in commit
Create branch from commit
Create Tag...
Cherry-pick commit...
Copy SHA
Copy tag
View on GitHub
Initial commit
Maarit Mäenpää
78292a7
+2 -0
1 changed file
README.md
README.md
@@ -0,0 +1,2 @@
1 + # GitHub_Workshop
2 + A repository created for the workshop on basics of GitHub.


File Edit View Repository Branch Help
Current repository
GitHub_Workshop
Current branch
main
Push origin
Last fetched 4 minu...
1
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
No branches to compare
Revert "Initial commit"
MaaritlMaenpaa • just now
Create HI_AGAIN
Maarit Mäenpää • 4 minutes ago
Polite Greetings
MaaritlMaenpaa • 11 minutes ago
Initial commit
Maarit Mäenpää • 26 minutes ago
This commit has not been pushed to the remote repository
Initial commit
Maarit Mäenpää 78292a7 +2 -0
1 changed file
README.md
README.md
@@ -0,0 +1,2 @@
1 + # GitHub_Workshop
2 + A repository created for the workshop on basics of GitHub.


File
Edit
View
Repository
Branch
Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Last fetched just now
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
No branches to compare
Revert "Polite Greetings"
MaaritlMaenpaa • just now
Revert "Create HI_AGAIN"
MaaritlMaenpaa • just now
Revert "Initial commit"
MaaritlMaenpaa • 1 minute ago
Create HI_AGAIN
Maarit Mäenpää • 5 minutes ago
Polite Greetings
MaaritlMaenpaa • 12 minutes ago
Initial commit
Maarit Mäenpää • 27 minutes ago
Polite Greetings
My first commit!
MaaritlMaenpaa
de8f9d0
1 changed file
HELLO.txt
HELLO.txt
The file is empty


File Edit View Repository Branch Help
Current repository
GitHub_Workshop
Current branch
main
Fetch origin
Last fetched just now
An updated version of GitHub Desktop is available and will be installed at the next launch. See what's new or restart GitHub Desktop.
Changes
History
Polite Greetings
de8f9d0
changed file
HELLO.txt
MaaritIMaenpaa/GitHub_Works
github.com/MaaritIMaenpaa/GitHub_Workshop
Verify it's you
AU
Teaching
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MaaritIMaenpaa / GitHub_Workshop
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Security
Insights
Settings
GitHub_Workshop
Public
Pin
Watch 0
Fork 0
main
1 Branch
0 Tags
Go to file
Code
About
A repository cre
basics of GitHub
MaaritIMaenpaa Revert "Polite Greetings"
71b8c16 · 1 hour ago
6 Commits
Activity
0 stars
0 watching
0 forks
README
Releases
No releases publishe
Create a new release
Packages
No packages publish
Publish your first pac
Add a README
Help people interested in this repository understand your project by adding a README.
Add a README
GitHub_Workshop
Maarit Mäenpää
Git Repositories
GitHub_Workshop
Search GitHub_Workshop
New
Sort
View
Details
Name
Date modified
Type
Size
Working on it...
Desktop
Documents
Downloads
Maarit Mäenpää au72181C
02. Projects
01. Consultations
Git Repositories
TECH FORFOS AP4 - Doku
Documents - TECH N-Gras
output
Consultations_2025
2nd round
0 items
GitHub_Workshop (0 items)
Select a single file to get more information and share your cloud content.

Exercise

1. Create a repository
2. Clone the repository

3. Add a script with code into your local repository, and make it visible on your online version of the repository.

4. Open your script locally. ERASE EVERYTHING. Save the file. Commit the changes.

5. Navigate GitHub to find the code from before erasing it.
6. Return the code as it was before erasing by reverting the commit from before.

7. Bonus: Add a collaborator to your repository.