R Version Control

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R Version Control with Git/GitHub

Git/GitHub enables continuous software/code development by tracking code changes to the **initial commit**, tracking who made the changes and enabling code collaboration. Here I will go through the basics on how to step-up Git/GitHub for version control with R/RStudio.

Required programs

To start off, ensure you have the following programs installed:

1. **Git** – the base program for tracking code changes.
   - **Windows**: You can download Git here. Double-click the downloaded .exe file to start the installation process.
   - **macOS**: First you need to install **Homebrew**. Copy and paste the Homebrew download link from (https://brew.sh/) to the Terminal and run.

   If you already have Homebrew installed, open Terminal and type:

   ```
   brew install git
   ```

2. **R** – the base R program
   - **Windows**: You can download R here
   - **macOS**: You can download R here
3. **RStudio** – IDE (integrated development environment) for R
   - **Windows and macOS**: You can download RStudio here
4. **GitHub Desktop** – for version control and collaboration
   - **Windows and macOS**: You can download GitHub Desktop here

Getting started

1. **Sign up for GitHub** – Got to GitHub and create a free account:

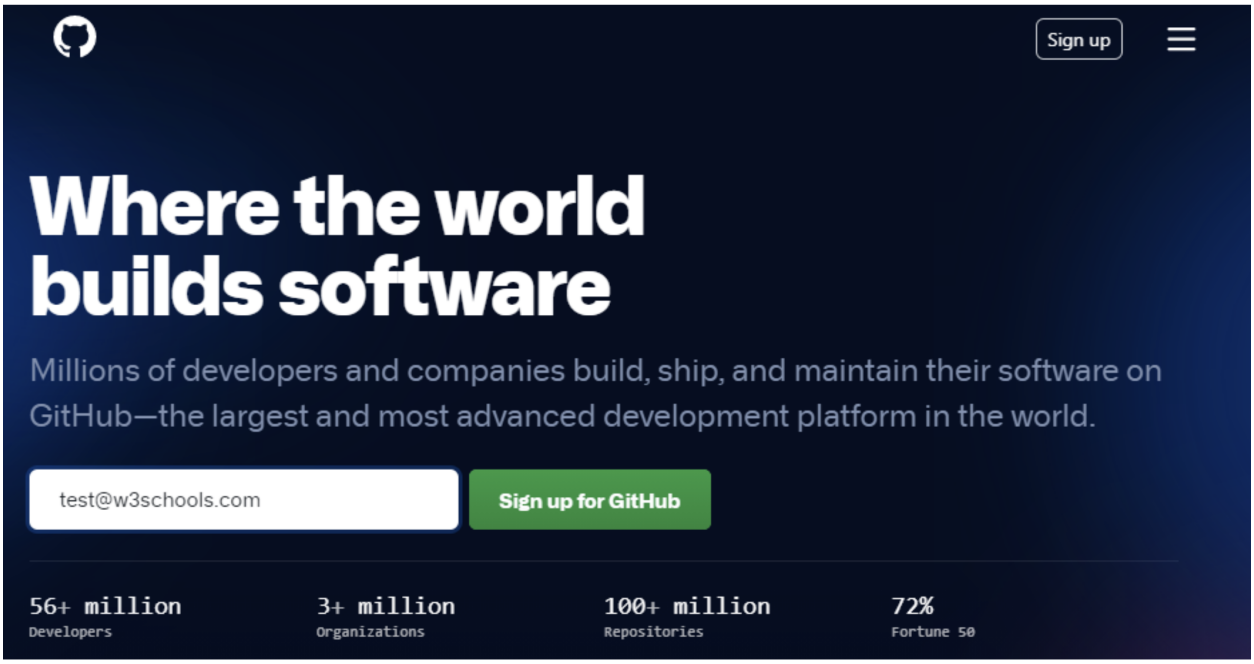
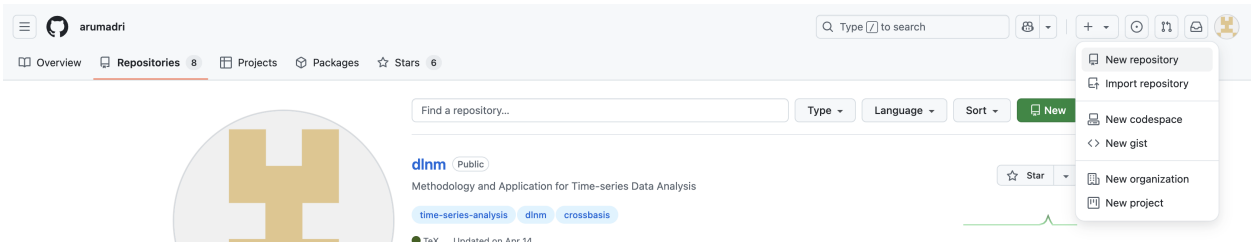


Figure 1: GitHub account setup

2. **Create a Repository** After signing in, click the + button to create a new repository:



3. **Fill in the repository details** (name, description, public/private, etc.) and click Create repository:

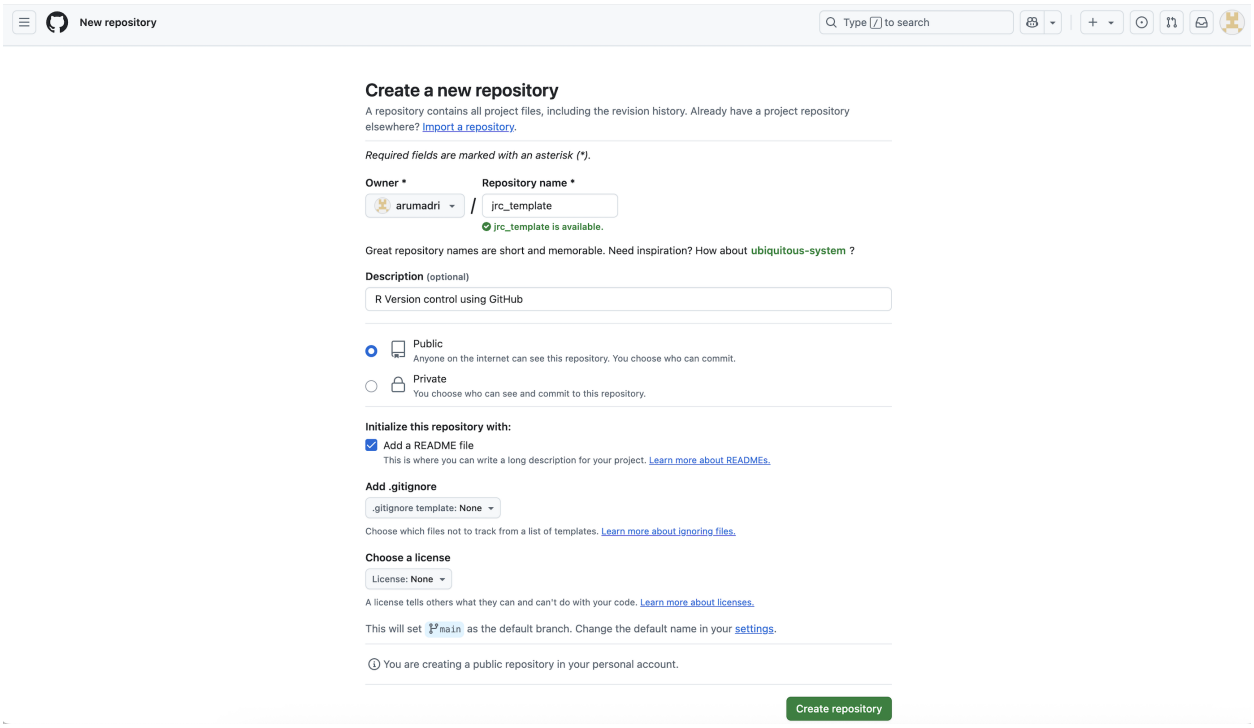


Figure 2: GitHub new repository details

Now you have set up your **remote repository**!!

4. **Clone remote repository to local machine (laptop/desktop)**

Inside the repository clikc the **<>Code** button and select **Open with GitHub Desktop** in the drop down menu.

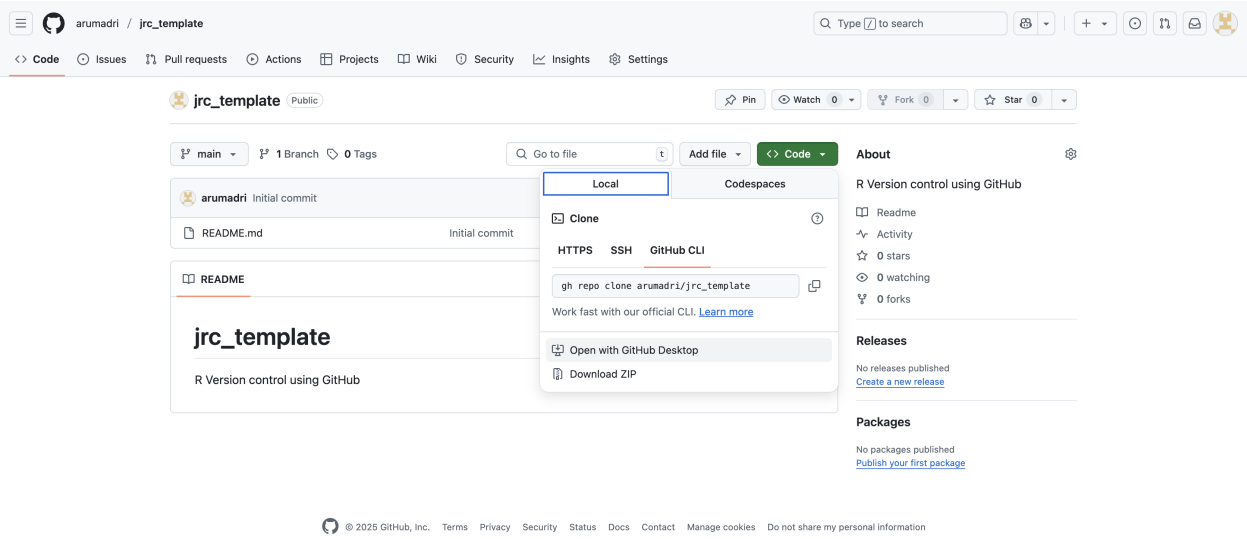
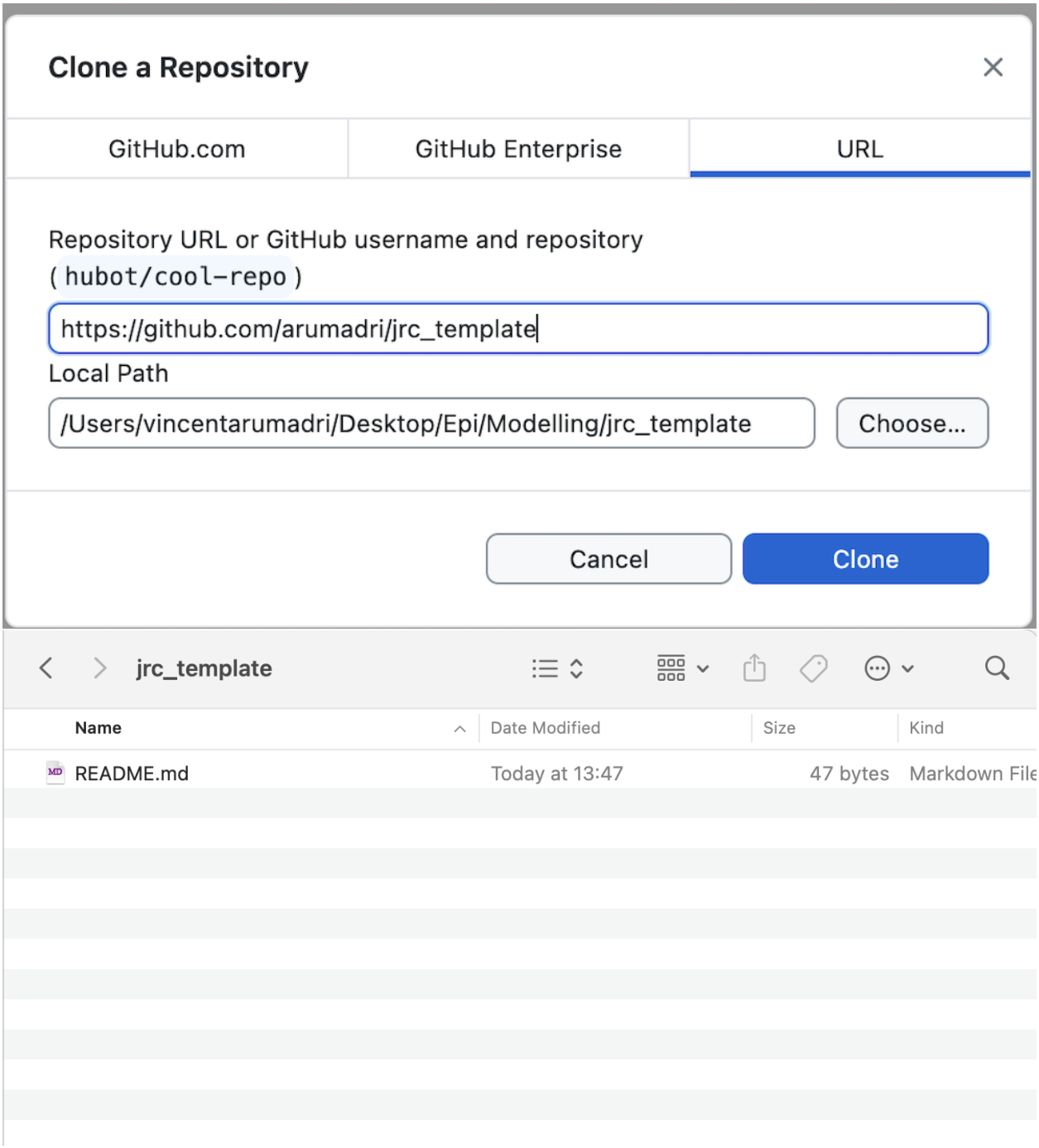


Figure 3: Clone remote to local

5. **Select path for local repository**



6. **Add or (save your new r scripts/files) to this folder**

This will initialize the **commit** and **push** prompt in GitHub Desktop to commit and push the changes respectively to the **remote repository**.

These prompts enable changes made to the folder (adding new files) or files (new edits to code) on the **local** machine to be **committed and pushed** to the **remote** for tracking and hence **version control**.

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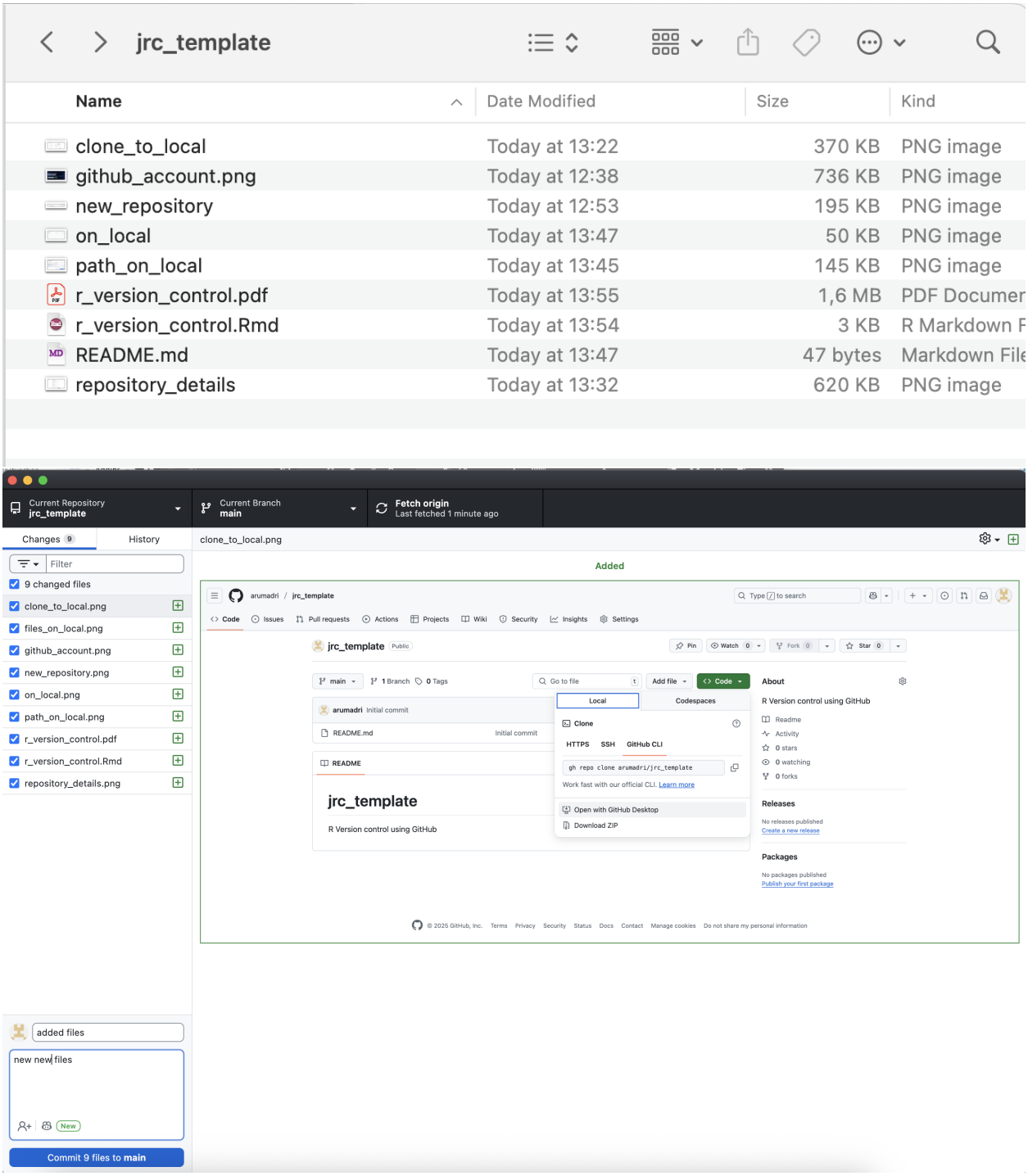

7. **Push** and **pull** changes to or from GitHub

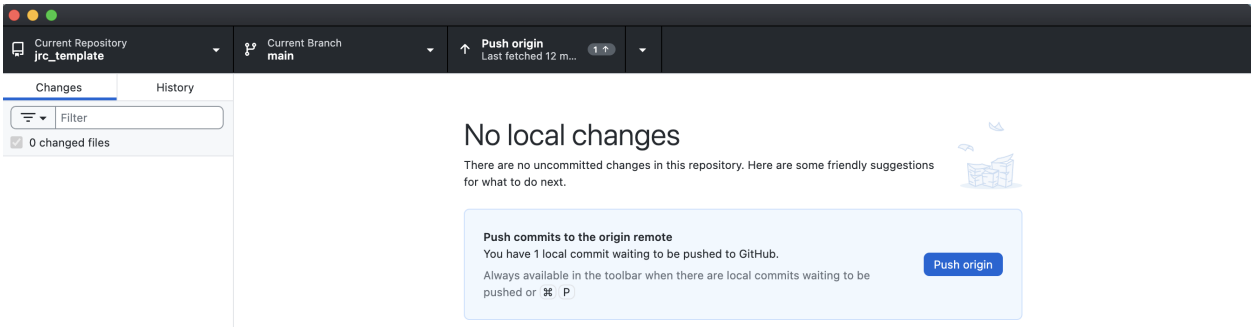

Figure 4: Push