**How to start working with GitHub on VSCode**

1. Open the terminal.
2. Type git init to initialize a new Git repository.
3. Type git add . to add all files to the staging area.
4. Type git commit -m “my first commit” to commit the files with a message. You can combine step3 and step4 into a one by doing git commit -a -m “some commit message”
5. Go to your GitHub repository and copy the repository URL.
6. Back in the terminal, type git remote add origin <repository-URL> to add a remote repository reference named 'origin'.
7. Push your commit to the remote repository using git push -u origin master. Note that -u sets the upstream for your branch, so from the second time onwards, you can just use git push.
8. Great!

**Fetching & Merging changes from GitHub Repo.**

git fetch origin

git merge origin/master

Here you first fetch the updates from the remote repository(origin) and merge the fetched changes into your current branch. Here origin/master means origin(remote repo)’s master(branch).

Or you can combine above two steps into one.

git pull origin master

sometimes branch name could be main, in that case you can just do git pull origin main

Here origin is GitHub repo and master is the branch of that repo. So basically we’re saying pull from origin(remote repo)’s master(branch).

From the second time of pulling, you can just do git pull

**How to solve merge conflict?**

**Stage, Commit and Push**

1. Type git add . or git add <filenames> to add the new changes to the staging area.
2. Then commit the changes using git commit -m "commit message". Or you can combine step1 and step2 into one line: git commit -a -m “commit message”
3. Finally, push the changes with git push

**Check wheteher current local git has remote git**

git remote -v

**Ignore certain files**

1. Create .gitignore file by typing nano .gitignore in terminal.
2. Add text like following:

# ignore all model files.

\*.keras

\*.h5

**Revert previous commit**

Option1:

git reset – soft HEAD~1: undo previous one commit

git reset –soft HEAD~n: undo previous n commits

This optiononly undos the commit, so changes made to Wokring tree stays same

Option2:

git reset --hard HEAD~1

This option undoes the commit and also undo changes have made in the wokring tree. (It’s a bit dangerou action, so you need to be catious when using it.)

**How to push big files(file\_size > 100MB)**

1. Download ans install Git-lfs
2. Setup Git lfs for your user account: git lfs install
3. If you have already tried to commit large files and got the error, you must first undo the commit by git reset – soft HEAD~1
4. Select the file types thay you want Git-lfs to manage by git lfs track “\*.keras”. This creates a .gitattributes file.
5. Stage the .gitattributes with other (large)files, then commit and push.

So in summary normal workflow could look like this:

git lfs install

git lfs track “\*.keras”

git add .

git commit -m “added model file”

git push