Using Git

"I'm an egotistical bastard, and I name all my projects after myself. First Linux, now git."

Linus Torvalds

We will…

- Configure Git

- Clone a CCP-WSI repository

- Change branch and create branches

- Modify the contents of the repository and commit to our local repository

- Push to and pull from the CCP-WSI training repository as necessary

- Submit a pull request

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Config settings

- Tell git your name and email address, these are added to commit messages:

  git config --global user.name "Your Name"

  git config --global user.email you@somewhere.ac.uk

- Make the CLI a bit prettier

  git config --global color.ui auto

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Clone the training repository

- Clone the repository:

  git clone https://github.com/CCP-WSI/repo-workshop.git

  cd repo-workshop

Pushing and pulling

- To download updates from GitHub

  git pull

- To upload changes to GitHub

  git push

Useful commands

- View current status of working copy and index

  git status

- View changes

  git diff

- View commit history

  git log

Listing and changing branches

- To list local branches:

  git branch

- To list remote branches (those on GitHub):

  git branch -r

- To change branch:

  git checkout *<branch-name>*

Branching

- Checkout the source branch

  git checkout *<src-branch>*

- Create the new branch locally

  git branch *<branch>* OR git checkout -b *<branch>*

- Then upload it to GitHub

  git push

Adding or editing a file

- Add the change to the index (staging area)
  git add *<file>*

- Commit the changes in the index to the local repository
  git commit

- Upload the changes in the local repository to GitHub
  git push

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Deleting a file

- Delete the file and remove it from the index (staging area)

  git rm *<file>*

- Commit the changes in the index to the local repository

  git commit

- Upload the changes in the local repository to GitHub

  git push

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Renaming a file

- Move the file, add the new file to the index and remove the old file from the index

  git mv *<src> <dest>*

- Commit the changes in the index to the local repository

  git commit

- Upload the changes in the local repository to GitHub

  git push

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Oops, I made a mistake!

- Undo staged changes
  - git reset *<file>*

- Undo committed changes
  - git revert *<commit>*

Pull requests