

# 2 Git Commands and User Interface

Arni Magnusson



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#### Overview



First steps clone, status, diff

**Submitting changes** add, commit, push

Refresh and document pull, log, tag

**Undo things** rm, checkout, clean, reset

**User interface** command line, rstudio, web browser, other



# First Steps

#### First Steps



clone Download a copy of remote repo to your computer

status See files you have changed

diff See lines you have changed

.git is a hidden folder containing a database of tracked changes



# **Submitting Changes**

## **Submitting Changes**



add Specify files to commit

commit Describe what was changed

push Upload to remote repo

3-step combo move

## **Submitting Changes**





#### **Commit Messages**



#### Tips for writing commit messages

Relatively short  $\sim$  60 *char* 

Describe purpose or specific things that were changed

Present tense often starting with a verb like 'Add', 'Improve', 'Document', ...

#### **Examples**

**MFCL** 

skj22

yft-2017

## **Commit Messages**







## **Refresh and Document**

#### Refresh and Document



pull Refresh local repo download latest commits from remote repo

log View commit messages can also view on github.com

tag Mark significant commit with a nickname example: 2.0.0



# **Undoing Things**

## **Undoing Things**



rm Remove file from repo it will still be 'remembered' in history

clean Remove files that are not part of the repo example: MFCL output files

reset Rewind to a previous snapshot of the project pull to go back to the 'present' (also) Un-add files



## **User Interface**

#### **User Interface**



Command line Works on all computers, full Git functionality

especially practical if you know the basic shell commands

RStudio Convenient if you're already using RStudio small subset of Git commands, noticeable lag, creates 'garbage' files

Web browser Commit history, files and lines changed, GitHub features

Other Most editors have Git support, also many dedicated Git clients view current changes (not yet committed)

## **User Interface (cont)**



#### Arni's shell scripts and aliases

```
add, br, clone, co, commit, di, log, merge, pull, push, reset, show, st, stash, tag
                                                                                 shorthand
    clone and rename OFP-SAM repo
commits
           that are not yet pushed
     Emacs Magit
eg
files
      that were changed in a given commit
lfh
     log-full | head
shortlog show commits by author
tag-delete
            remote repo
url
    show remote repo location
br-full, commits-full, files-full, log-full, shortlog-full, show-full, tag-full
```

#### **Summary**



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User interface command line, rstudio, web browser, other