



Pranav Kulkarni

Theoretical Neuroscience Lab, IISER Pune

pranavcode@gmail.com



Everything Git!

1. Introduction
2. Installation
3. Configuration & First repo
4. File Status Lifecycle
5. Staging
6. Undo
7. Log
8. Remote
9. Branching
10. Tagging



1. Introduction

- Applications
 - Backups, Collaboration, Organization
- Benefits
 - Speed
 - Simple design
 - Parallel branches
 - Fully distributed
- Example project using Git.
- Found at – git-scm.com



2. Installation

- Linux

- # apt-get install git

- # yum install git

- Mac

- # brew install git

- Windows

- Installer from git-scm.com



3. Configuration & First repo

```
$ git config --global user.name "Name"  
$ git config --global user.email "e-mail-id"  
$ git config --global core.editor "emacs -nw"  
$ git config --global color.ui true  
$ git config --global credential.helper cache  
  
$ git init first-repo  
  
$ git clone repo-remote-url
```



4. Staging

```
$ git status
```

```
$ echo "First file." > README
```

```
$ git diff
```

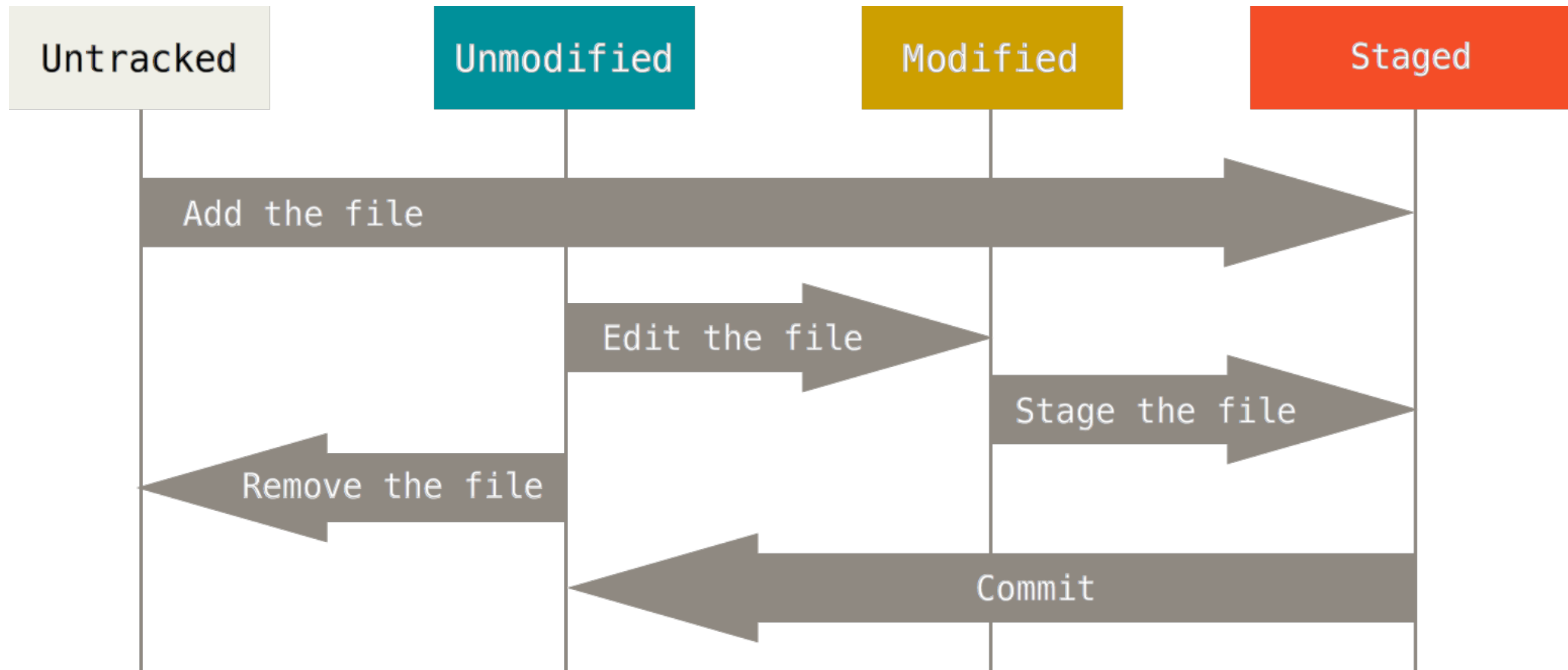
```
$ git add README
```

```
$ git rm README
```

```
$ git diff --cached
```

```
$ git commit -m "commit message"
```

5. File Status Lifecycle



6. Undo

```
$ git commit --amend
```

```
$ git reset HEAD
```

```
$ git reset HEAD file
```

```
$ git checkout file
```


7. Log

```
$ git log
```

```
$ git log --author='name'  
--pretty=oneline  
--graph  
--oneline  
--decorate  
--all
```

```
$ git show
```

8. Remote

```
$ git remote add origin "URL"
```

```
$ git push -u origin master
```

```
$ git pull origin master
```

```
$ git fetch
```

```
$ git merge
```



9. Branching

```
$ git branch branch-name
```

```
$ git checkout branch-name
```

```
$ git checkout -b branch-name
```

```
$ git push origin branch-name
```

```
$ git branch -d branch-name
```

```
$ git push origin --delete branch-name
```

10. Tagging

```
$ git tag -a tag-name -m "message"
```

```
$ git push --tags
```

```
$ git show tag-name
```

```
$ git checkout tag-name
```

```
$ git tag -d tag-name
```

```
$ git push origin :refs/tags/tag-name
```

Thank you!

