University of BRISTOL

Git

Data Science Enrichment – Week 4
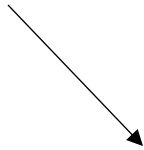
Efi Psomopoulou

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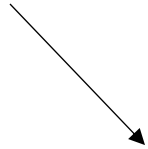
Git vs GitHub

Git vs GitHub

Tool

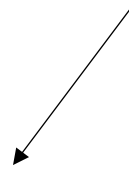# Git vs GitHub
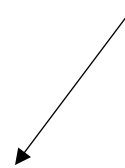
Tool

Service

Git vs GitHub
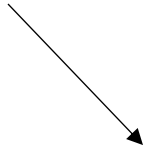
Tool

Service

Other Services
- gitlab.com
- bitbucket.org

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Set up

- Download and install Git

  - Creating a local git repository

  - Adding a new file

  - Create a commit

- Create a free GitHub.com account

Set up

- **Download and install [Git](#)**

       - Creating a local git repository

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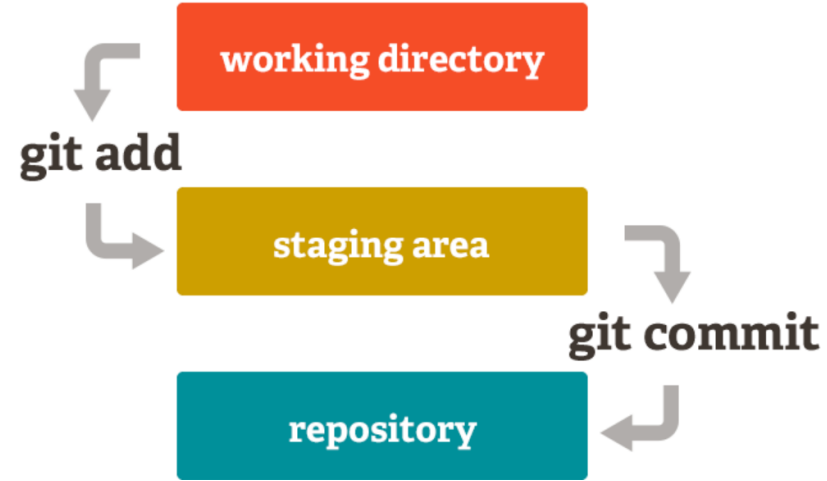
https://rb.gy/11k11

States of Git

Workflow

Tutorial to set up local repository

- https://medium.com/@munniomer/an-intro-to-git-and-github-for-beginners-part-i-tutorial-9be4be9cac8d
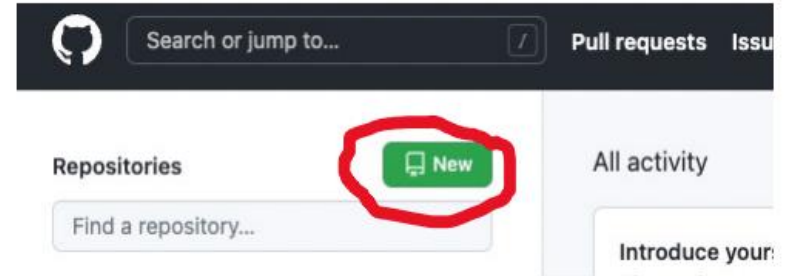
https://rb.gy/wdvzo

Set up

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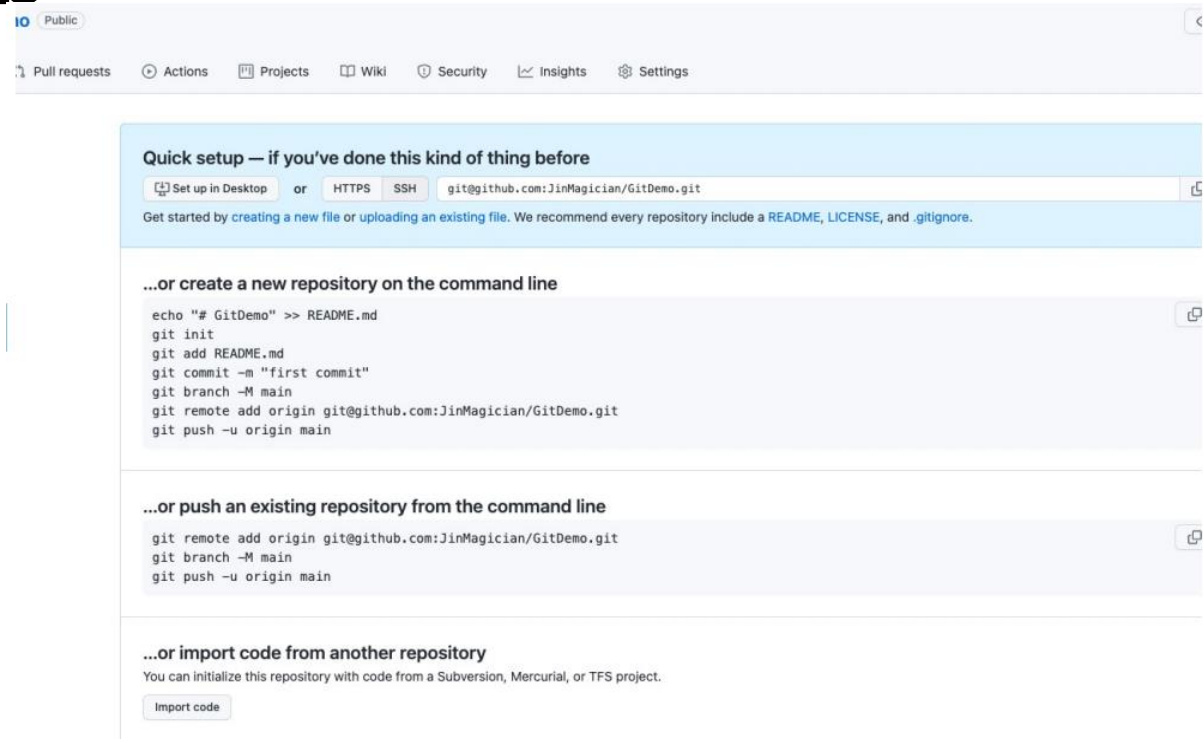- **Create a free GitHub.com account**

Set up GitHub

- Create a GitHub account if you haven't got one.
- Log into your GitHub account.
- Create a new repo with:
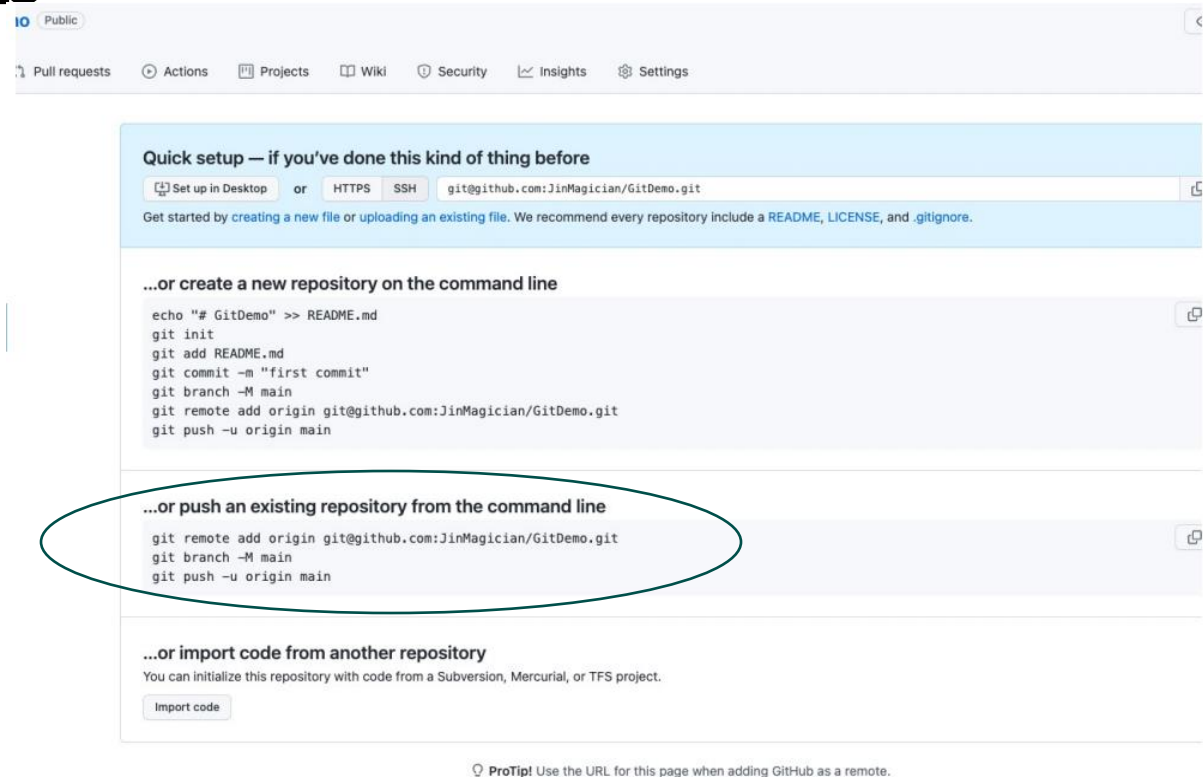 - Repository name: GitDemo

Set up GitHub

▪ You will see this page after creating your project.

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Set up GitHub

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page after creating
your project.

bristol.ac.uk

Push changes to GitHub

▪ In your SSH Terminal Window:
  - push your local repo to remote repo
    git push origin master
  - type yes if you get the following

```
The authenticity of host 'github.com (140.82.113.4)' can't be established.
ECDSA key fingerprint is SHA256:p2QAMXNIC1TJYWeIOttrVc98/R1BUFWu3/LiyKgUfQM.
Are you sure you want to continue connecting (yes/no)? yes


-- You will see this error message

git@github.com: Permission denied (publickey).
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
```

Question: How to connect to the remote repo?   Hint: Authentication

▪ [Set up SSH](https://rb.gy/swp1e)!

https://rb.gy/swp1e

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Push changes to GitHub

▪ In your SSH Terminal Window:
— generate ssh key pairs
ssh-keygen -t rsa (and press enter 4 times)

```
:~/app (master) $ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_rsa.
Your public key has been saved in /home/ubuntu/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:pz7onIFOhRpwzoSCWto0VDvizvS1RbiVzN2LKwgmavo ubuntu@ip-172-31-83-223
The key's randomart image is:
```
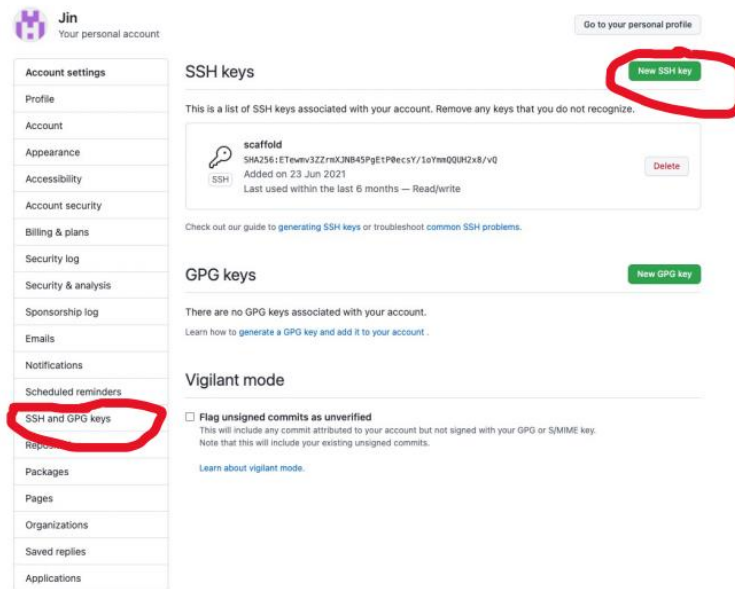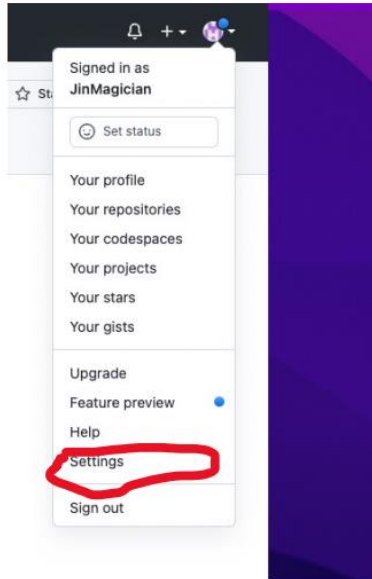
-- *print public key*
cat /home/ubuntu/.ssh/id_rsa.pub

-- copy your key

```
:~/app (master) $ cat /home/ubuntu/.ssh/id_rsa.pub
sh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQC...OI1nKwpkgmAmrVtpso1OEkzePjn,
9LXW3ePiR12EEPzKFmyVUlV6rNDltfr+tdn6z1LaLdEQj6dtn7GUVfMYBMuRJh0Jfg5tfAVpIagpOY+
6Kyg3uWlupKJBUAliAEJhg11jXHNAQyQUamNHL863+AtjCi7WvIG29ij1rJirtmnJrd8X64TcAg2r/y0
Cp+p+A1WsvahMWGj26Q9D9RURgvj12mZ+wje/wD729PgbG1mZU8H+M/3HC99XyWGZvZ11ERiyxqR9MGi
8gBMbCMt/m2bfI8/DtobUXqUZguxsqpDUlcSvN7509YviAInZQmao5EphD...ubuntu@ip-172-31-83-
223
:~/app (master) $
```

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Push changes to GitHub

- In your GitHub account, click Settings, then click SSH and GPG keys, New SSH key

Push changes to GitHub

- In your GitHub account, create New SSH key with
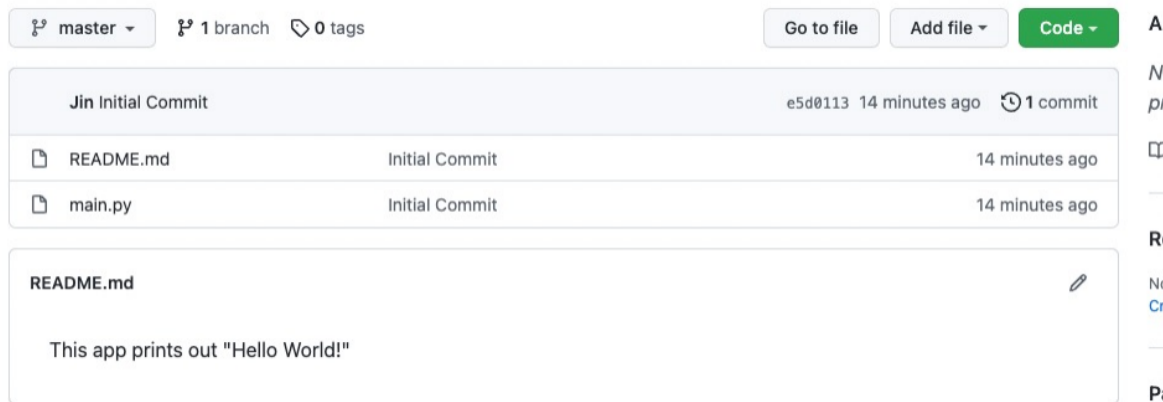   - Title: github-demo
    - Key: the key you just copied
- Add SSH key

```
:~/app (master) $ cat /home/ubuntu/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1y...QAQABAAAB...CDF...CZKWmJT9JJGrI1hKWpKgMAMIVtpsGIOEKzePy...i
E9LXW3ePiR12EEPzKFmyVUlV6rNDltfr+tdn6z1LaLdEQj6dtn7GUVfMYBMuRJh0Jfg5tfAVpIagpOY
5Kyg3uWlupKJBUAliAEJhg11jXHNAQyQUamNHL863+AtjCi7WvIG29ij1rJirtmnJrd8X64TcAg2r/y
Cp+p+A1WsvahMWGj26Q9D9RURgvj12mZ+wje/wD729PgbG1mZU8H+M/3HC99XyWGZvZ11ERiyxqR9M
BgBMbCMt/m2bfI8/DtobUYgUZguvsgzP1UsSmNn759QYvjAInZOmgcFFphP/ ubuntu@ip-172-31-
-223
:~/app (master) $
```

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Push changes to GitHub

▪ In your SSH Terminal Window:
  – push your local repo to remote repo
    git push origin master

▪ Check the repo in you GitHub account.

Useful resources

- [Visual Cheatsheet](#)

https://rb.gy/6y01c

- [GitHub Cheatsheet](#)

rebrand.ly/ldanagj