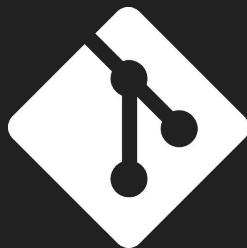




# PXL AIR QUALITY: Git & GitHub 101





# Wat is Git?

GIT(1)

Git Manual

GIT(1)

**NAME**

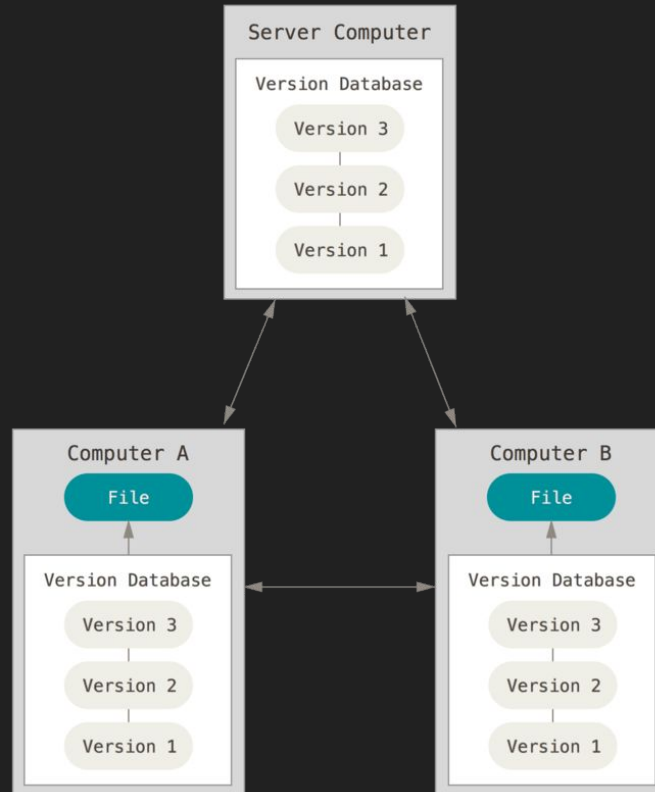
git - the stupid content tracker

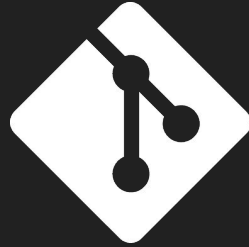


# Wat is Git?

- Distributed Revision Control System
- Gemaakt door Linus Torvalds, 7 April 2005
- Origineel ontworpen voor het Linux project
- Gratis & Open Source

# Wat is Git?

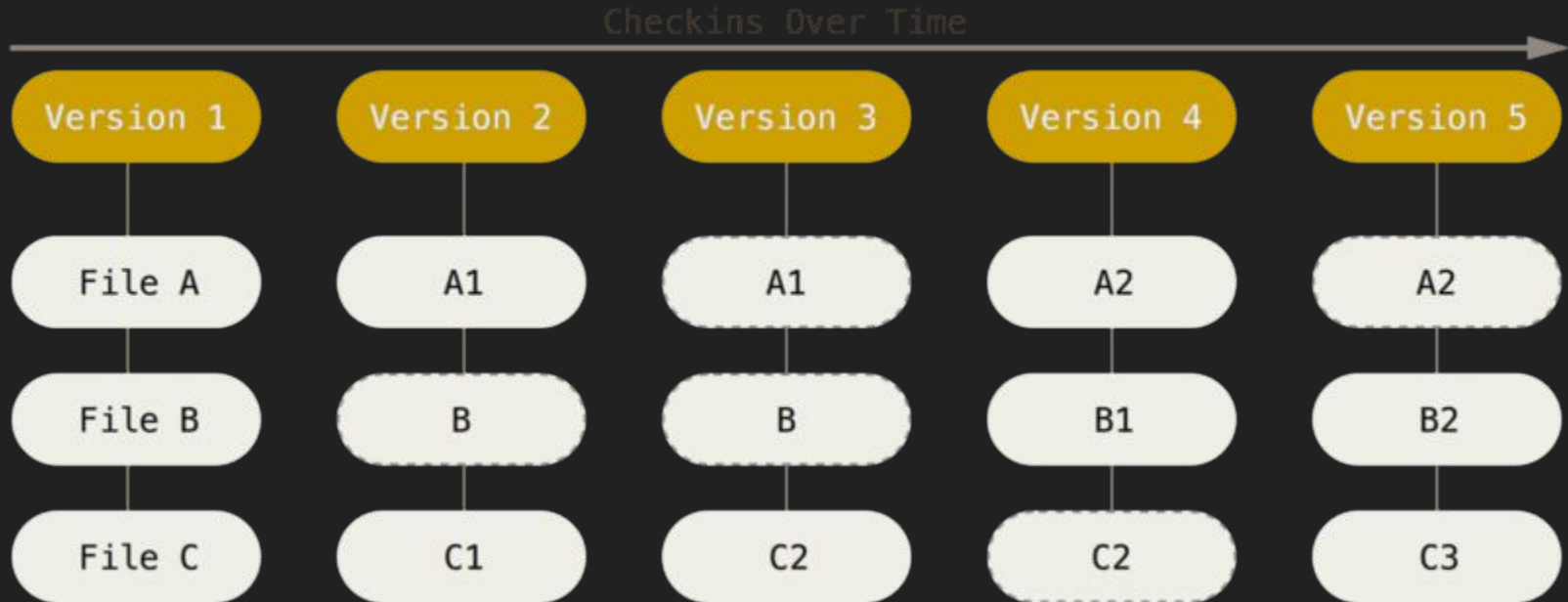


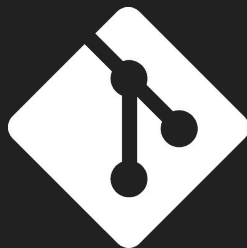


Wat is zijn snapshots?



# Wat zijn snapshots?





# Wat zijn commits?

In case of fire



1. git commit



2. git push



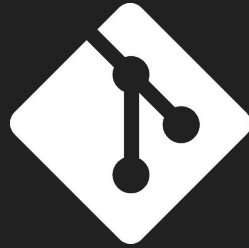
3. leave building



# Wat zijn commits?

- Een manier om snapshots te maken
- Een Git project is een verzameling van vele commits
- Het houdt 3 belangrijke delen van informatie bij:
  - Hoe de files veranderd zijn ten opzichte van de vorige commit
  - Een referentie naar de commit die ervoor kwam
  - Een hash code

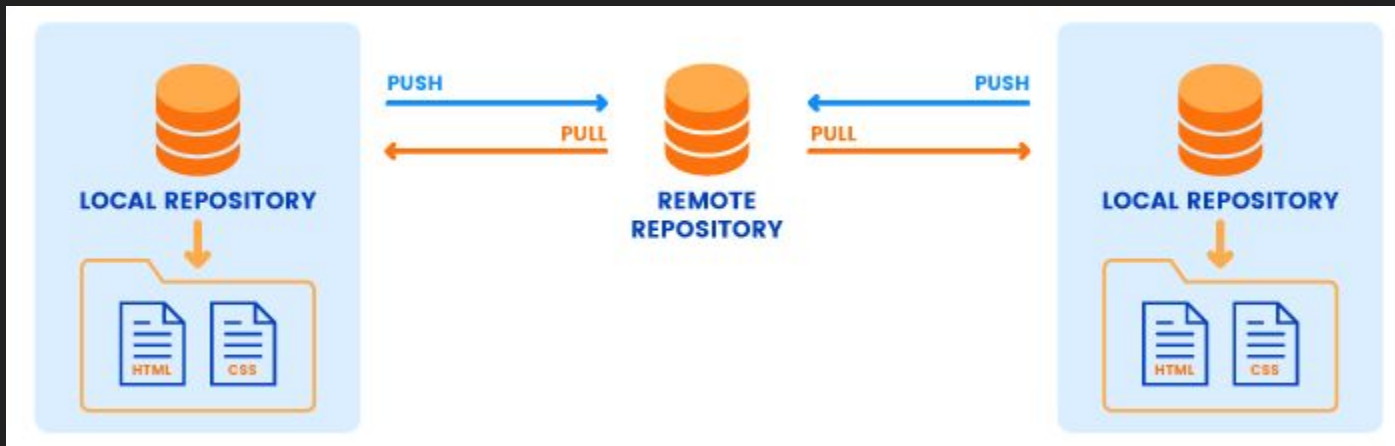


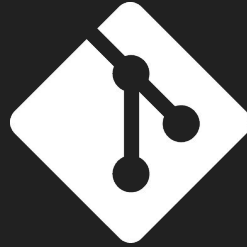


# Wat zijn repositories?

# Wat zijn repositories?

- Ook wel “repo” genoemd
- De plaats waar Git al zijn informatie opslaat
- Is zowel lokaal als op een server
- Iedere developer houdt zijn eigen versie bij





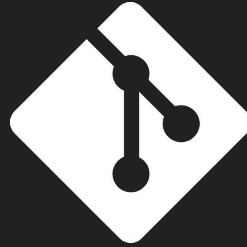
# Wat zijn branches?



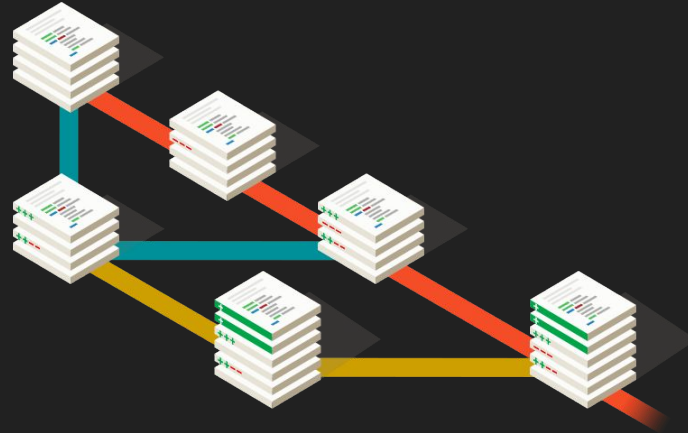


# Wat zijn branches?

- Alle commits leven in een branch
- Er kunnen heel veel branches in een project zijn
- De hoofdbranch van een Git project noemt de “**master**” branch



# Hoe ziet een Git project er uit?



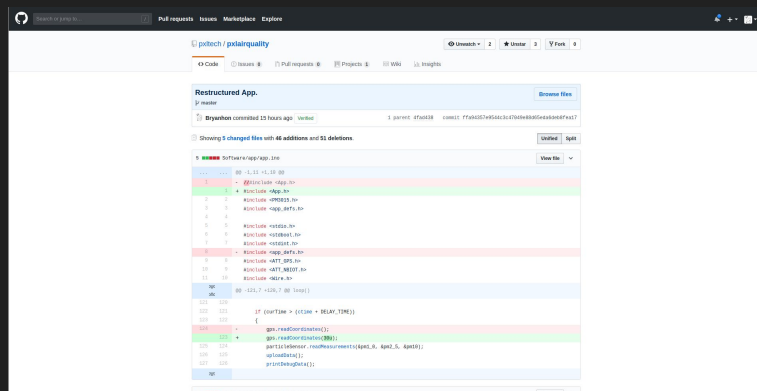
# Hoe ziet een Git project er uit?



```
* c9ae488 - Sat, 9 Mar 2019 21:33:27 +0100 (15 hours ago) (HEAD -> development, origin/development, feature_branch)
  Added git ignore rule. - Bryan Honof
* ffa9435 - Sat, 9 Mar 2019 21:18:47 +0100 (15 hours ago) (origin/master, origin/HEAD, master)
  Restructured App. - Bryan Honof
* 4fad438 - Thu, 28 Feb 2019 20:39:53 +0100 (10 days ago)
  Worked on the class. - Bryan Honof
* f0e2bfd - Tue, 26 Feb 2019 20:28:23 +0100 (12 days ago)
  deleted: config.yml - Bryan Honof
* 79677c9 - Tue, 26 Feb 2019 16:38:24 +0100 (12 days ago) (tag: v0.1)
  Fixed README.md. - Bryan Honof
* 907f23e - Tue, 26 Feb 2019 16:36:31 +0100 (12 days ago)
  Merge branch 'master' of github.com:pxltech/pxlairquality - Bryan Honof
* fefe67d - Mon, 18 Feb 2019 14:43:10 +0100 (3 weeks ago)
  Slides upload - Hogeschool PXL - Electronics-ICT
  b07fb5b - Mon, 18 Feb 2019 14:27:30 +0100 (3 weeks ago)
  Merge branches 'master' and 'master' of https://github.com:pxltech/pxlairquality - Hogeschool PXL - Electronics-ICT
* 6562329 - Mon, 18 Feb 2019 13:48:06 +0100 (3 weeks ago)
  Set theme jekyll-theme-architect - Vincent Claes
* b02f92c - Sun, 17 Feb 2019 14:13:50 +0100 (3 weeks ago)
  Update README.md - Vincent Claes
* f8a866e - Sun, 17 Feb 2019 14:13:33 +0100 (3 weeks ago)
  Update README.md - Vincent Claes
* cf44ed3 - Mon, 18 Feb 2019 14:27:14 +0100 (3 weeks ago)
  Create TPH-V2-DXF.zip - Hogeschool PXL - Electronics-ICT
* 29c5596 - Tue, 26 Feb 2019 16:35:03 +0100 (12 days ago)
  modified: Software/app/app.ino - Bryan Honof
* e127475 - Tue, 19 Feb 2019 22:04:59 +0100 (3 weeks ago)
  Worked on PM3015 class. - Bryan Honof
* b3355bb - Tue, 19 Feb 2019 19:20:30 +0100 (3 weeks ago)
  Got the PM3015 to work. - Bryan Honof
* 5551ac9 - Tue, 19 Feb 2019 15:17:32 +0100 (3 weeks ago)
  Added to PM3015 class - Bryan Honof
* eb73560 - Tue, 19 Feb 2019 13:53:13 +0100 (3 weeks ago)
  Started working on PM3015 class. - Bryan Honof
* 296a3c3 - Tue, 19 Feb 2019 09:38:16 +0100 (3 weeks ago)
  Did something cannot remember what :). - Bryan Honof
* 5129542 - Sun, 17 Feb 2019 21:48:37 +0100 (3 weeks ago)
  Started work on PM3015 drive circuit. - Bryan Honof
* eb6d656 - Sun, 17 Feb 2019 15:44:25 +0100 (3 weeks ago)
  modified: README.md - Bryan Honof
* 86f7f4c - Sun, 17 Feb 2019 15:38:49 +0100 (3 weeks ago)
  Cleaning up readme - Bryan Honof
* 4df0dcd - Sun, 17 Feb 2019 15:26:03 +0100 (3 weeks ago)
  Started working on making the app's logic into its own class. - Bryan Honof
* f22fe9d - Sun, 17 Feb 2019 12:57:43 +0100 (3 weeks ago)
  renamed: test.sh -> allthingsapi.sh - Bryan Honof
* 43b4711 - Sun, 17 Feb 2019 12:46:04 +0100 (3 weeks ago)
  Added functionality to get latest asset state and aggregated data. - Bryan Honof
* be5258a - Sun, 17 Feb 2019 12:14:00 +0100 (3 weeks ago)
  Preparing POST option in script. - Bryan Honof
* 7e7f98f - Sun, 17 Feb 2019 11:51:43 +0100 (3 weeks ago)
  Added possibility to GET asset states from devices trough curl. - Bryan Honof
* e3db85f - Sun, 17 Feb 2019 00:38:38 +0100 (3 weeks ago)
  Added TPH v2 functionality - Bryan Honof
```



# Wat is GitHub?

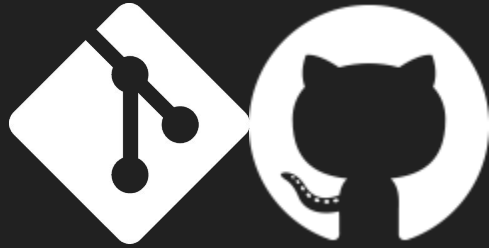




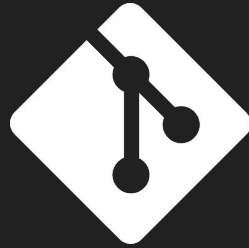
# Wat is GitHub?

- [www.github.com](https://www.github.com)
- GitHub is een “**remote repository**”
- Zorgt ervoor dat meerdere developers samen kunnen werken
- Geeft meer functionaliteit aan Git (ui, bug tracking, forking, ...)





Lets begin!



# Git installeren



<https://www.git-scm.com/downloads>

About

Documentation

Downloads

GUI Clients

Logos

Community

The entire [Pro Git book](#) written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

## Downloads

 [Mac OS X](#)  [Windows](#)

 [Linux/Unix](#)

Older releases are available and the [Git source repository](#) is on GitHub.



### GUI Clients

Git comes with built-in GUI tools ([git-gui](#), [gitk](#)), but there are several third-party tools for users looking for a platform-specific experience.

[View GUI Clients](#) →

### Logos

Various Git logos in PNG (bitmap) and EPS (vector) formats are available for use in online and print projects.

[View Logos](#) →

### Git via Git

If you already have Git installed, you can get the latest development version via Git itself:

```
git clone https://github.com/git/git
```

You can also always browse the current contents of the git repository using the [web interface](#).



# GitHub aanmaken

[Why GitHub?](#)[Enterprise](#)[Explore](#)[Marketplace](#)[Pricing](#)[Sign in](#)[Sign up](#)

# Build better together

Host and review code, manage projects and build your best software alongside 31 million developers.

[Join GitHub for free →](#)

\$7 per month

## Pro

- ∞ Unlimited public repositories
- ∞ Unlimited private repositories
- ∞ Unlimited collaborators
- ✓ Issues and bug tracking
- ✓ Project management
- ✓ Advanced tools and insights

[Choose Pro](#)

\$9 per user/month

## Team

- ← All features in Pro
- ∞ Unlimited public repositories
- ✓ Team access controls
- ✓ User management and billing

[Choose Team](#)

\$21 per user/month

## Enterprise

- ← All features in Team
- ✓ Security and compliance tools
- ✓ Deployment options
- ✓ Advanced administration tools
- ✓ Unified search & contributions
- ✓ Priority support
- ✓ 99.95% uptime SLA Enterprise Cloud

[Choose Enterprise](#)[View more details on all our Plans →](#)

## Get started with GitHub Enterprise

Choose [Enterprise Cloud](#) to work alongside 31 million developers right here on [GitHub.com](#), or start your [free Enterprise Server trial](#) to deploy GitHub to your own servers, AWS, Azure, or GCP.

[Contact Sales →](#)



**Step 1:**  
Set up your account



**Step 2:**  
Choose your plan



**Step 3:**  
Tailor your experience

## Create your personal account

**Username \***

bryanhonof



This will be your username. You can add the name of your organization later.

**Email address \***

Bryan.Honof@student.pxl.be



We'll occasionally send updates about your account to this inbox. We'll never share your email address with anyone.

**Password \***

\*\*\*\*\*

Make sure it's [more than 15 characters](#) OR at least 8 characters including a number and a lowercase letter. [Learn more.](#)

## Verify account



?

By clicking "Create an account" below, you agree to our [terms of service](#) and [privacy statement](#). We'll occasionally send you account related emails.

Create an account

### You'll love GitHub

**Unlimited** public repositories

**Unlimited** private repositories

✓ Limitless collaboration

✓ Frictionless development

✓ Open source community

# Welcome to GitHub

You're a few steps away from building better software, @bryanhonof.



**Completed**  
Set up your account



**Step 2:**  
Choose your plan



**Step 3:**  
Personalize your experience

## Choose your plan

With tools developers love and the world's largest open source community, there's no wrong choice.



**Free**

The basics of GitHub for every developer

**\$0**

per month

**Includes:**

- ∞ Unlimited public and private repositories
- ✓ 3 collaborators for private repositories
- ✓ Issues and bug tracking
- ✓ Project management

Are you a [student](#)? Get access to the best developer tools for free with the [GitHub Student Developer Pack](#).



**Pro**

Pro tools for developers with advanced requirements

**\$7**

per month

[\(view in EUR\)](#)

**Includes:**

- ∞ Unlimited public and private repositories
- ∞ Unlimited collaborators
- ✓ Issues and bug tracking
- ✓ Project management
- ✓ [Advanced tools and insights](#)



**Help me set up an organization next**

Organizations are separate from personal accounts and are best suited for businesses who need to manage permissions for many employees.

[Learn more about organizations](#)



**Send me updates on GitHub news, offers, and events**


Unsubscribe anytime in your email preferences. [Learn more](#)


**Continue**




# Welcome to GitHub

You'll find endless opportunities to learn, code, and create, [@bryanhonof](#).

 **Completed**  
Set up a personal account

 **Step 2:**  
Choose your plan

 **Step 3:**  
Tailor your experience

How would you describe your level of programming experience?

- ☐ Very experienced
- ☐ Somewhat experienced
- ☒ Totally new to programming

What do you plan to use GitHub for? (check all that apply)

- ☐ Design
- ☐ Project Management
- ☒ School projects
- ☐ Development
- ☐ Research
- ☐ Other (please specify)

Which is closest to how you would describe yourself?

- ☐ I'm a professional
- ☒ I'm a student
- ☐ I'm a hobbyist
- ☐ Other (please specify)

What are you interested in?

space x

e.g. tutorials, android, ruby, web-development, machine-learning, open-source

Submit

[skip this step](#)



# Please verify your email address

Before you can contribute on GitHub, we need you to verify your email address.

An email containing verification instructions was sent to **Bryan.Honof@student.pxl.be**.

Didn't get the email? [Resend verification email](#) or [change your email settings](#).

## GitHub

Product	Platform	Support	Company
Features	Developer API	Help	About
Security	Partners	Community Forum	Blog
Enterprise	Atom	Training	Careers
Customer stories	Electron	Status	Press
Pricing	GitHub Desktop	Contact GitHub	Shop
Resources			

Outlook

Zoeken

Nieuw bericht

Verwijderen

Archiveren

Ongewenste e-mail

Opruimen

Verplaatsen naar

Categoriseren

Ongedaan maken

Het nieuwe Outlook

Favorieten

Mappen

Inbox4

Junk Email31

Drafts2

Sent Items

Scheduled

Deleted Items26

Archive

Conversation Hist...

RSS Subscriptions

Nieuwe map

Prioriteit

Overige

Filter

GitHub

[GitHub] Please verify y...12:45

To secure your GitHub account, we just ...

[GitHub] Please verify your email address.

Ontvangt u te veel e-mailberichten? Afmelden

Label: Junk Email (30 dagen) Verloopt op: Di 9-4-2019 13:45

GitHub

GitHub <noreply@github.com>

Zo 10-3-2019 12:45

Bryan Honof

Almost done, @bryanhonof! To complete your GitHub sign up, we just need to verify your email address:  
Bryan.Honof@student.pxl.be.

Verify email address

Once verified, you can start using all of GitHub's features to explore, build, and share projects.

Button not working? Paste the following link into your browser: [https://github.com/users/bryanhonof/emails/69598798/confirm\\_verification/de1641154341b8fc79f29d0c1c623f2cd693706b](https://github.com/users/bryanhonof/emails/69598798/confirm_verification/de1641154341b8fc79f29d0c1c623f2cd693706b)

You're receiving this email because you recently created a new GitHub account or added a new email address. If this wasn't you, please ignore this email.

Email preferences · [\[articles/github-terms-of-service/\\*%7CUPR\\_UTM%7C\\*\]Terms](#) · [\[articles/github-privacy-policy/\\*%7CUPR\\_UTM%7C\]Privacy](#) · [Sign into GitHub](#)

GitHub

Sent with <3 by GitHub.  
GitHub, Inc. 88 Colin P Kelly Jr Street  
San Francisco, CA 94107

Your email was verified.

×

**Repositories**

Your most active repositories will appear here.

[Create a repository](#) or [explore repositories](#).

# Learn Git and GitHub without any code!

Using the Hello World guide, you'll create a repository, start a branch, write comments, and open a pull request.

[Read the guide](#) [Start a project](#)

## Discover interesting projects and people to populate your personal news feed.





Your news feed helps you keep up with recent activity on repositories you [watch](#) and people you [follow](#).



[Explore GitHub](#)

 **Welcome to the new dashboard. Get closer to the stuff you care about most.** ×

**Discover repositories**



**syuilo/misskey**

  A federated blogging platform  


 **Vue**  641



**btcpayserver/btcpayserver**

A cross platform, self-hosted server compatible with Bitpay API

 **C#**  832

**ros-planning/moveit**

 The MoveIt! motion planning framework

 **C++**  335

[Go to Explore](#) →



# GitHub repo aanmaken

Repositories

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Discover repositories

**dmtrKovalenko/material-ui-pickers**  
Accessible, customizable, delightful date & time pickers for @material-ui/core  
 TypeScript 806

**MicrosoftDocs/windows-itpro-docs**  
This is used for contributions to the Windows 10 content for IT professionals on docs.microsoft.com.  
 PowerShell 607


**WeblateOrg/weblate**  
Web based localization tool with tight version control integration.  
 Python 1.3k

Go to Explore ...

## Create a new repository

A repository contains all project files, including the revision history.

Owner

 bryanhonof ▾

Repository name \*

test-repo ✓

Great repository names are short and memorable. Need inspiration? How about [symmetrical-octo-carnival?](#)

Description (optional)

optional description

☒  **Public**

Anyone can see this repository. You choose who can commit.

☐  **Private**

You choose who can see and commit to this repository.

☐ **Initialize this repository with a README**

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

Add a license: **None** ▾ ⓘ

Create repository





bryanhonof / test-repo

Watch 0

Star 0

Fork 0

Code

Issues 0

Pull requests 0

Projects 0

Wiki

Insights

Settings

## Quick setup — if you've done this kind of thing before

or **HTTPS** **SSH** `https://github.com/bryanhonof/test-repo.git`

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

## ...or create a new repository on the command line

```
echo "# test-repo" >> README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/bryanhonof/test-repo.git
git push -u origin master
```

## ...or push an existing repository from the command line

```
git remote add origin https://github.com/bryanhonof/test-repo.git
git push -u origin master
```

## ...or import code from another repository

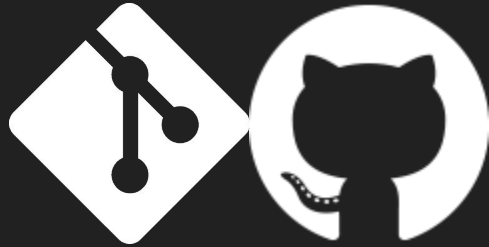
You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

[Import code](#)

**ProTip!** Use the URL for this page when adding GitHub as a remote.







Files in de repo krijgen



# Files in de repo krijgen

```
echo "# test-repo" >> README.md
```

```
git init
```

```
git add README.md
```

```
git commit -m "first commit"
```

```
git remote add origin https://github.com/bryanhonof/test-repo.git
```

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

bryanhonof / test-repo

👁 Watch 0

★ Star 0

🍴 Fork 0

<> Code

🔍 Issues 0

🔗 Pull requests 0

📁 Projects 0

📖 Wiki

📊 Insights

⚙ Settings

optional description

Edit

[Manage topics](#)

📦 2 commits

🌿 1 branch

📦 0 releases

👤 1 contributor

Branch: master ▾


New pull request


Create new file



Upload files

Find File

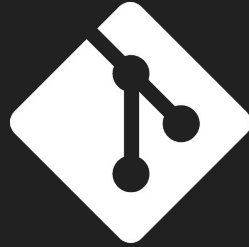
Clone or download ▾

 Bryanhonof Fixed readme Latest commit c75e16a 31 seconds ago

 README.md Fixed readme 31 seconds ago

 README.md 

test-repo



Het leven wat makkelijker maken

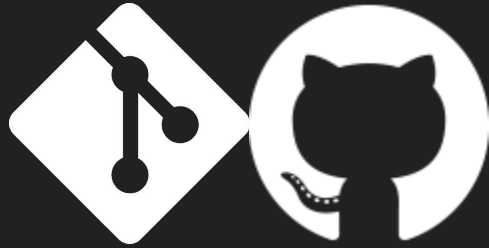


# Het leven wat makkelijker maken

```
git config --global user.name "John Doe"
```

```
git config --global user.email johndoe@example.com
```

```
git config --list
```



Follow along demo



# Handige links

<https://wiki.archlinux.org/index.php/git>

<https://git-scm.com/book/en/v2>

<https://guides.github.com/>

<https://github.com/git/git>

[https://kevintshoemaker.github.io/StatsChats/GIT\\_tutorial.html](https://kevintshoemaker.github.io/StatsChats/GIT_tutorial.html)

# Vragen

PXL



vincent.claes@pxl.be



bryan.honof@student.pxl.be





# PXL AIR QUALITY: Git & GitHub 101

