

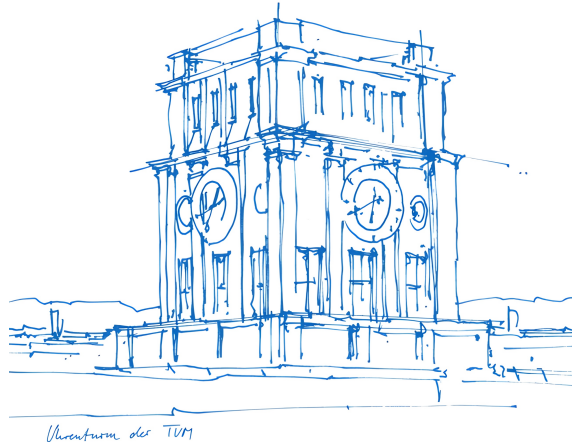
Open Source Lab

Source Code Hosting

Fabian Sauter, Christian Menges, Alexander Stephan

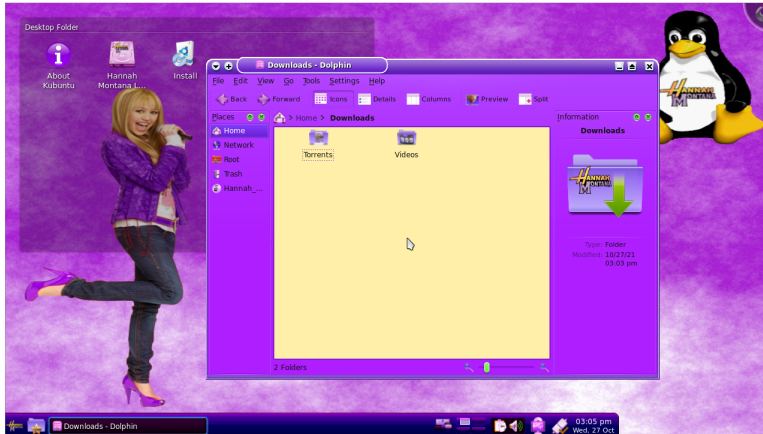
Chair of Connected Mobility
TUM School of Computation, Information and Technology
Technical University of Munich

Garching, November 6, 2023

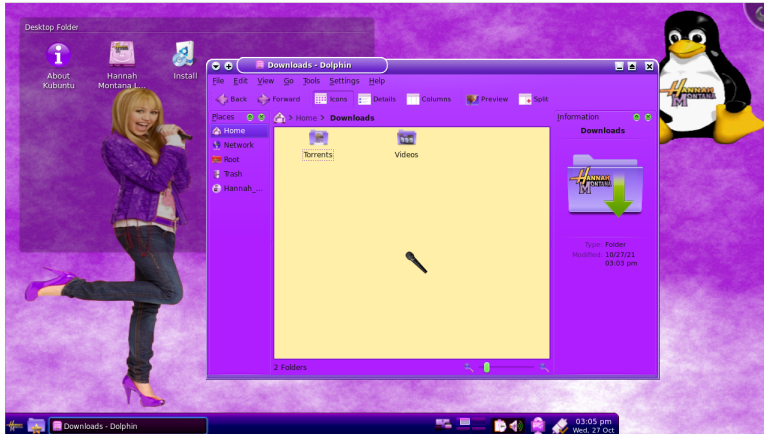


Why?

A “free” Backup

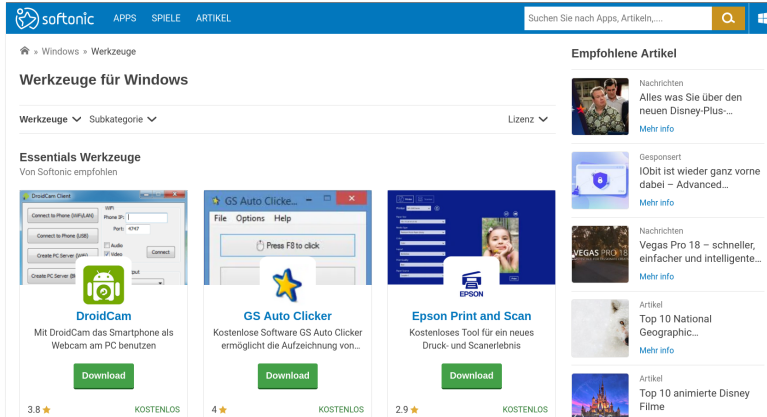


A “free” Backup



A Way to Publish





The screenshot shows the Softonic website interface. The top navigation bar includes the Softonic logo and links for APPS, SPIELE, and ARTIKEL. A search bar is located on the right. The main content area is titled 'Werkzeuge für Windows' and features a section for 'Essentials Werkzeuge' recommended by Softonic. Three software tools are highlighted: DroidCam, GS Auto Clicker, and Epson Print and Scan. Each tool has a preview image, a description, a 'Download' button, and a rating. To the right, there is a sidebar titled 'Empfohlene Artikel' (Recommended Articles) listing various news and articles with thumbnail images.

softonic APPS SPIELE ARTIKEL Suchen Sie nach Apps, Artikeln,....

» Windows » Werkzeuge

Werkzeuge für Windows

Werkzeuge ▾ Subkategorie ▾ Lizenz ▾

Essentials Werkzeuge

Von Softonic empfohlen

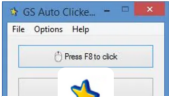


DroidCam

Mit DroidCam das Smartphone als Webcam am PC benutzen

[Download](#)

3.8 ★ KOSTENLOS



GS Auto Clicker

Kostenlose Software GS Auto Clicker ermöglicht die Aufzeichnung von...

[Download](#)

4 ★ KOSTENLOS



Epson Print and Scan

Kostenloses Tool für ein neues Druck- und Scannerlebnis

[Download](#)

2.9 ★ KOSTENLOS

Empfohlene Artikel



Nachrichten
Alles was Sie über den neuen Disney-Plus-...
[Mehr info](#)



Gesponsert
IObit ist wieder ganz vorne dabei – Advanced...
[Mehr info](#)



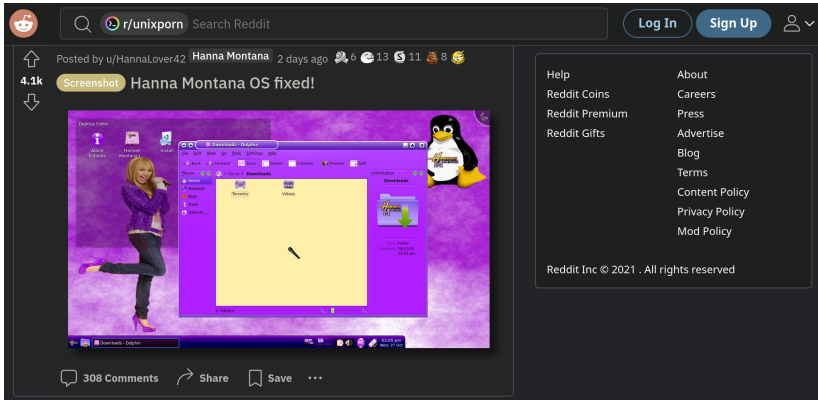
Nachrichten
Vegas Pro 18 – schneller, einfacher und intelligente...
[Mehr info](#)



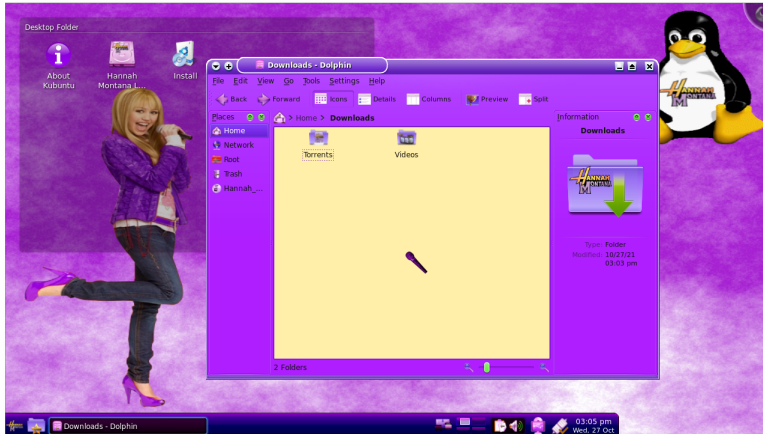
Artikel
Top 10 National Geographic...
[Mehr info](#)



Artikel
Top 10 animierte Disney Filme



Managing the Crouds

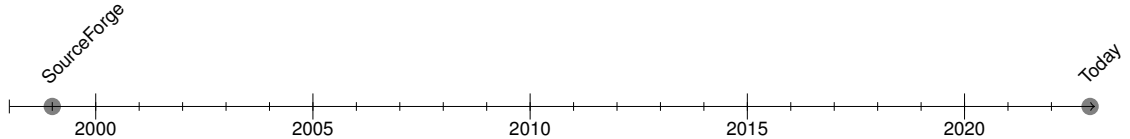


Evolution

- In FOSS development communities, a forge is a web-based collaborative software platform for both developing and sharing computer applications. A forge platform is generally able to host multiple independent projects.

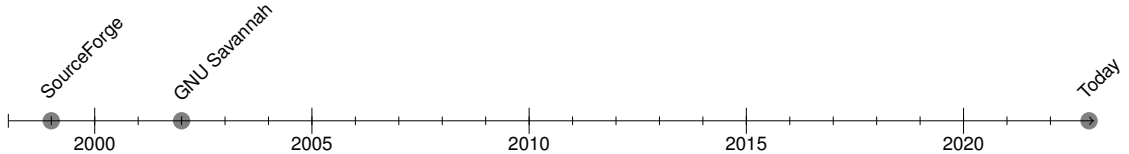
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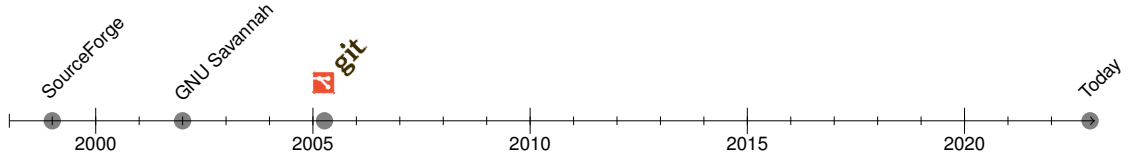
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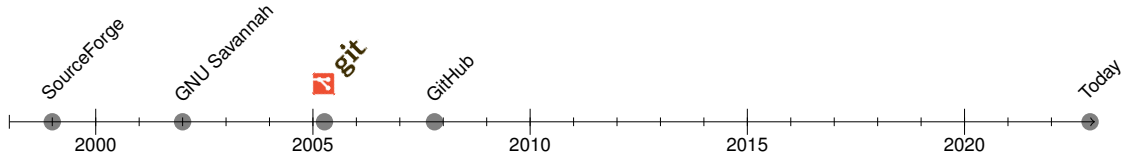
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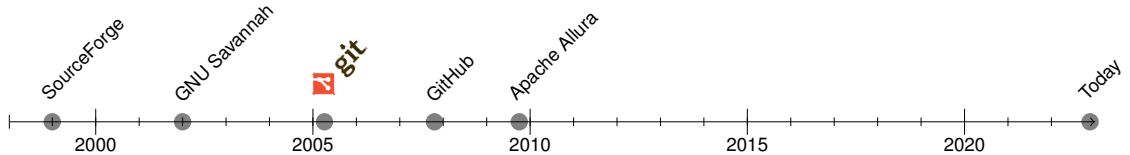
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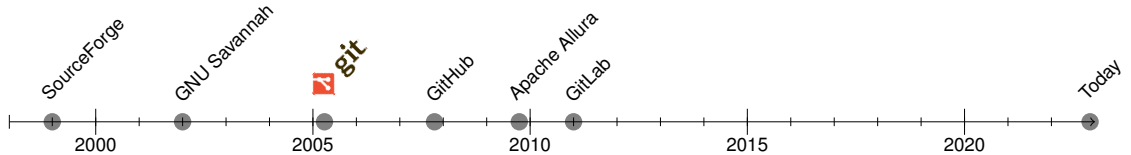
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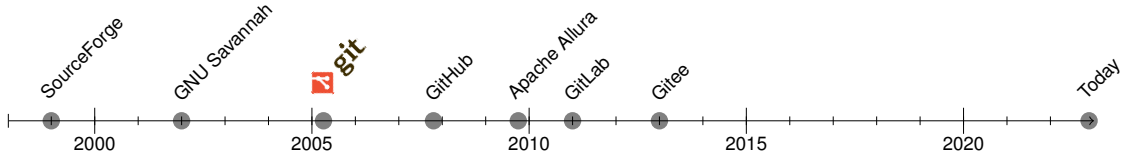
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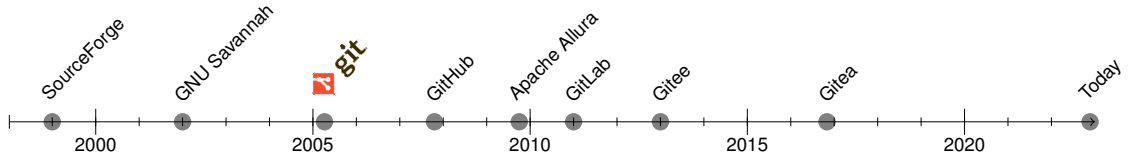
Evolution

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Evolution

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Mailing Lists

A mere historical curiosity?

- List of subscribers who receive all messages sent to a “reflector” email address.
- Code changes are proposed by sending an email with a textual `diff`.
- List members debate the change with email replies.
- Subsequent changes are more `diffs`.
- Usability depends on the quality of your email client and how he handles threading.

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Advantages

- The threaded nature of emails.
- User generation of patches.
- Free mixing of discussion and patches.
- Does **not** depend on a company!

Based on: <https://begriffs.com/posts/2018-06-05-mailing-list-vs-github.html>

Mailing Lists - Example

```

From      Chengfeng Ye <>
Subject   [PATCH] sound/usb: fix null pointer dereference on pointer cs_desc
Date      Sun, 24 Oct 2021 04:17:36 -0700

The pointer cs_desc return from snd_usb_find_clock_source could
be null, so there is a potential null pointer dereference issue.
Fix this by adding a null check before dereference.

Fixes: 9ec73005 ("ALSA: usb-audio: Refactoring UAC2/3 clock setup code")
Signed-off-by: Chengfeng Ye <cyeaa@connect.ust.hk>
---
 sound/usb/clock.c | 4 +++
 1 file changed, 4 insertions(+)

diff --git a/sound/usb/clock.c b/sound/usb/clock.c
index 81d5ce07d548..98345a695dcc 100644
--- a/sound/usb/clock.c
+++ b/sound/usb/clock.c
@@ -496,6 +496,10 @@ int snd_usb_set_sample_rate_v2v3(struct snd_usb_audio *chip,
     union uac23_clock_source_desc *cs_desc;

     cs_desc = snd_usb_find_clock_source(chip, clock, fmt->protocol);
+
+    if (!cs_desc)
+        return 0;
+
     if (fmt->protocol == UAC_VERSION_3)
         bmControls = le32_to_cpu(cs_desc->v3.bmControls);
     else
--
2.17.1

```

Source: <https://lkml.org/lkml/2021/10/24/86>

Git Diff

```
git diff <commit-hash-1> <commit-hash-2>
```

```
diff --git a/cpr/curlholder.cpp b/cpr/curlholder.cpp
index 4596ed7f..c70026ec 100644
--- a/cpr/curlholder.cpp
+++ b/cpr/curlholder.cpp
@@ -29,7 +29,7 @@ CurlHolder::~CurlHolder() {

    std::string CurlHolder::urlEncode(const std::string& s) const {
        assert(handle);
-       char* output = curl_easy_escape(handle, s.c_str(), s.length());
+       char* output = curl_easy_escape(handle, s.c_str(), static_cast<int>(s.length()));
        if (output) {
            std::string result = output;
            curl_free(output);
@@ -40,7 +40,7 @@ std::string CurlHolder::urlEncode(const std::string& s) const {

    std::string CurlHolder::urlDecode(const std::string& s) const {
        assert(handle);
```

Git Patch

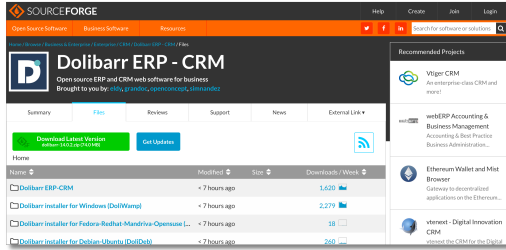
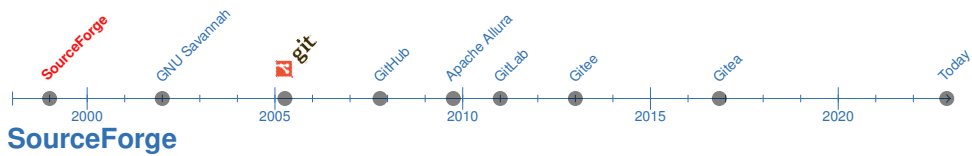
```
git format-patch -1 <commit-hash>
```

```
From 67b5c0be845d6b6e3a3bf8ed0c1fe38c533c22dc Mon Sep 17 00:00:00 2001
From: Kili <kili+git@mailbox.org>
Date: Tue, 19 Oct 2021 17:45:37 +0200
Subject: [PATCH] Fix bugprone narrowing conversions
```

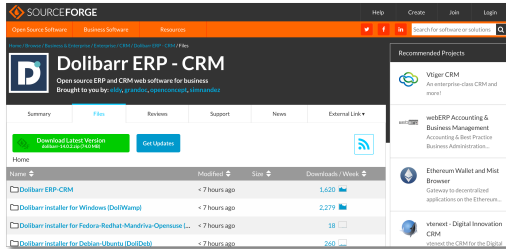
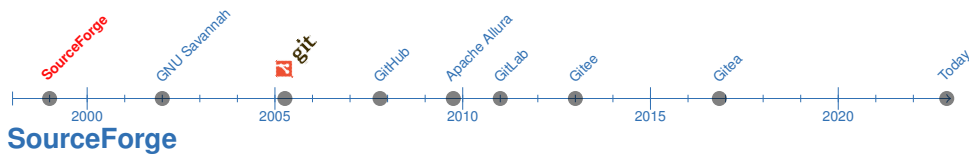
```
---
cpr/curlholder.cpp | 4 +---
cpr/util.cpp | 3 +-
2 files changed, 4 insertions(+), 3 deletions(-)

diff --git a/cpr/curlholder.cpp b/cpr/curlholder.cpp
index 4596ed7f..c70026ec 100644
--- a/cpr/curlholder.cpp
+++ b/cpr/curlholder.cpp
@@ -29,7 +29,7 @@ CurlHolder::~CurlHolder() {

    std::string CurlHolder::urlEncode(const std::string& s) const {
```

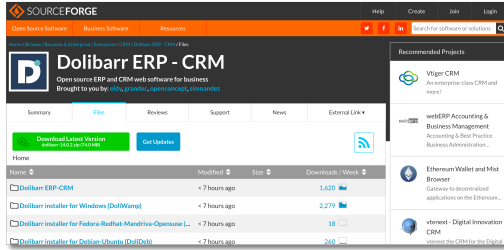
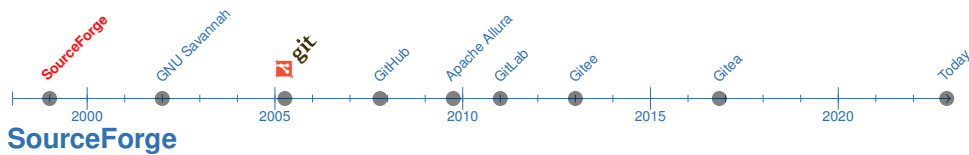


<https://sourceforge.net>



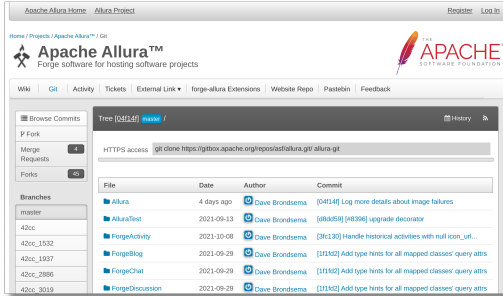
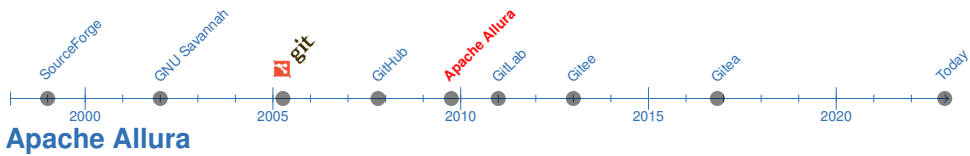
<https://sourceforge.net>

- Founded in 1999
- First provider of a centralized location for free and open-source software
- PHP backend released in January 2000 (SourceForge Alexandria)
- Last **free** release November 2001
- Then SourceForge Enterprise Edition or SFEE ⇒ TeamForge
- Between 2003 and 2005, a lot of stuff was broken
- 2006 first profitable quarter and integration of Google ads
- Since 2013, bundleware

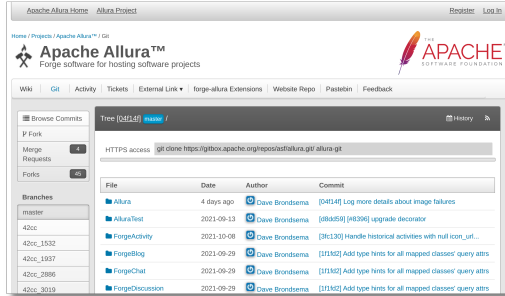
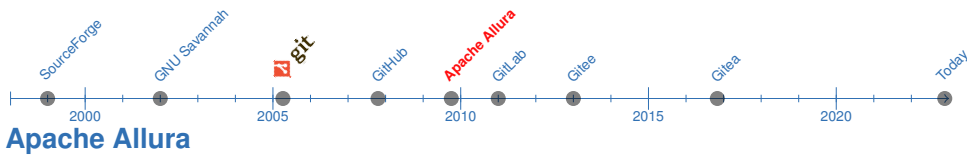


<https://sourceforge.net>

- Has been temporarily banned in China three times: in September 2002, July 2008 (for about a month), and August 6, 2012 (for several days).
- September 2012: Acquired from Geeknet by the online job site Dice.com for \$20 million
- January 2016: Sold to the San Diego-based BIZX, LLC (Slashdot Media since 2019) for an undisclosed amount

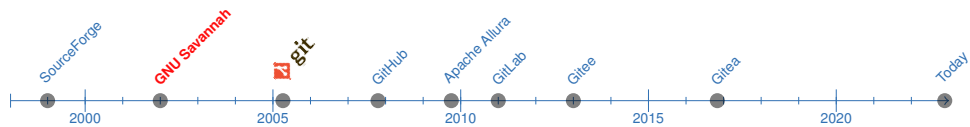


<https://forge-allura.apache.org/p/allura/git/ci/master/tree/>



- Started in October 2009 as a Python, open-source reimplementation for the developer tools from SourceForge
- First announced in March 2011
- Platform for new projects on SourceForge since July 2011
- Since March 2013, part of the Apache Software Foundation (ASF)

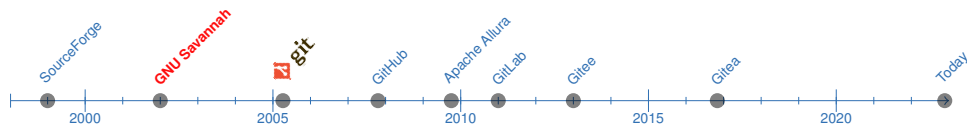
<https://forge-allura.apache.org/p/allura/git/ci/master/tree/>



GNU Savannah

The screenshot shows the 'GNU GRUB - Git Repositories' page on the GNU Savannah website. The page has a yellow header with the GNU Savannah logo (a bull) and the title 'GNU GRUB - Git Repositories'. Below the header is a navigation bar with links: Group, Main, Homepage, Download, Mailing lists, Source code, Bugs, Tasks, and News. The main content area is divided into two sections: 'Browsing the Git Repository' and 'Getting a Copy of the Git Repository'. The 'Browsing the Git Repository' section contains a paragraph explaining that users can browse the Git repository of this project with their web browser, giving them a good picture of the current status of the source files. The 'Getting a Copy of the Git Repository' section is divided into two parts: 'Anonymous clone:' and 'Member clone:'. The 'Anonymous clone:' part shows the command: `git clone https://git.savannah.gnu.org/git/grub.git`. The 'Member clone:' part shows the command: `git clone <membername>@git.savannah.gnu.org:/scm/git/grub.git`. The left sidebar contains links for 'Not Logged in' (Login, New User), 'This Page' (Language, Clean Reload, Printer Version), 'Search' (a search box with a dropdown menu set to 'in Projects' and a 'Search' button), 'Hosted Projects' (Hosting requirements, Register New Project, Full List, Contributors Wanted, Statistics), and 'Site Help' (User Docs: Cookbook, User Docs: In Depth, Guide, Get Support).

<https://savannah.gnu.org>

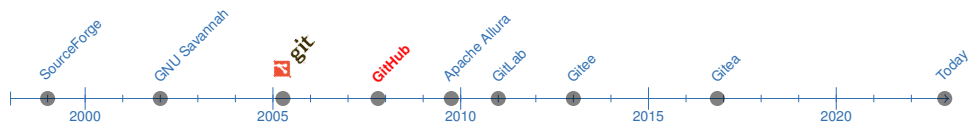


GNU Savannah

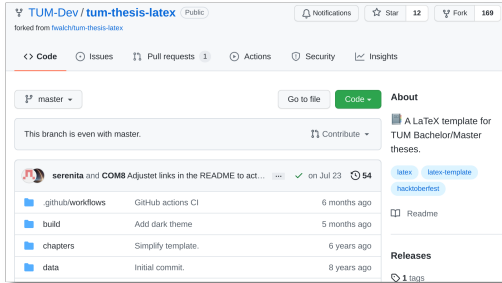
The screenshot shows the 'GNU GRUB - Git Repositories' page. It features a sidebar with navigation links like 'Main', 'Homepage', 'Download', 'Mailing lists', 'Source code', 'Bugs', 'Tasks', and 'News'. The main content area includes a 'Browsing the Git Repository' section with a description of the repository and a 'Getting a Copy of the Git Repository' section with instructions for anonymous and member clones. The anonymous clone command is: `git clone https://git.savannah.gnu.org/git/grub.git`. The member clone command is: `git clone <membername>@git.savannah.gnu.org:/scm/git/grub.git`.

<https://savannah.gnu.org>

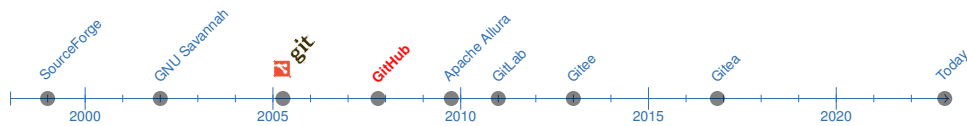
- Loïc Dachary installed SourceForge for GNU projects.
- SourceForge turned into proprietary software $\Rightarrow$ fork (2001/2002)
- Only for free software without **ANY** proprietary parts like image formats, etc.
- Split into savannah.gnu.org and savannah.nongnu.org
- Host for all GNU projects



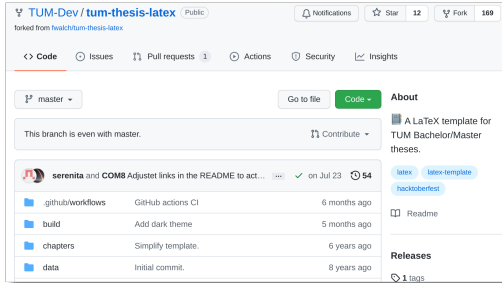
GitHub



<https://github.com>

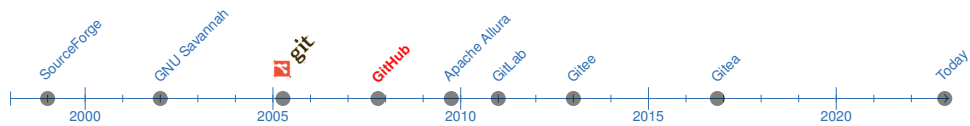


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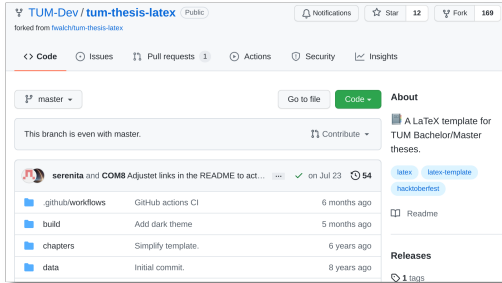


<https://github.com>

- Initially written using Ruby on Rails, but more recently broken up into services using e.g. Go, Java and even some Haskell
- Development of the GitHub.com platform began on October 19, 2007
- Launched in April 2008
- 2010 surpassed SourceForge and Google Code

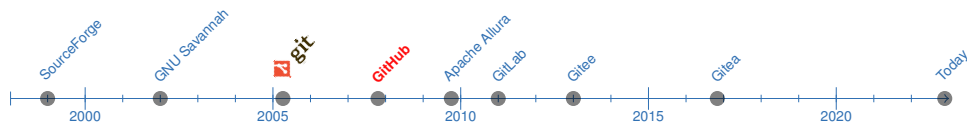


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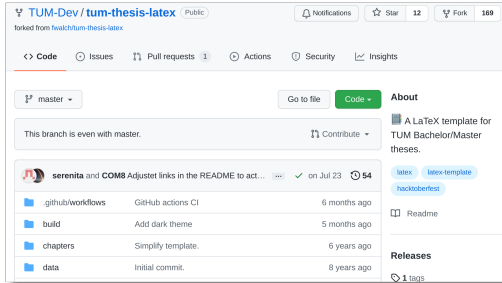


<https://github.com>

- November 2011 GitHub Enterprise is available (self-hosted)
- July 2012 Andreessen Horowitz invested \$100 million in venture capital
- Bought by Microsoft in 2018 for \$ 7.5 Billion
- November 2020, source code for GitHub Enterprise Server was leaked
- Freemium model (Support, GitHub Enterprise Server, Job postings, CI minutes, ...)



GitHub

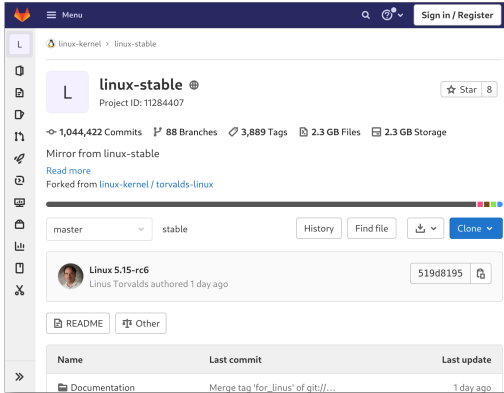


<https://github.com>

- Censorship: youtube-dl, Russian suicide manuals
- “Supports” Open Source, but their code is **not** Open Source!
- 2019 blocking developers in Iran, Crimea, Cuba, North Korea, and Syria
- Hosts the code for ICE (U.S. Immigration and Customs Enforcement)
- Some internal drama. . .



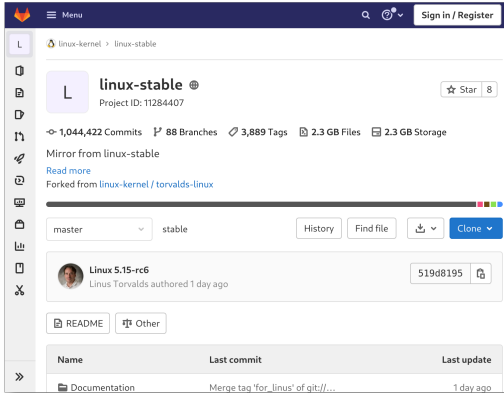
GitLab



<https://gitlab.com>

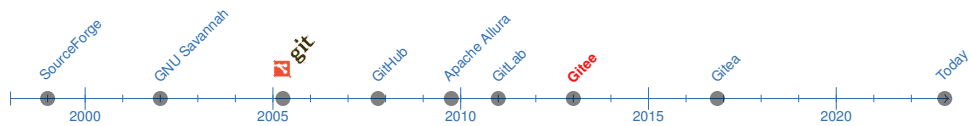


GitLab

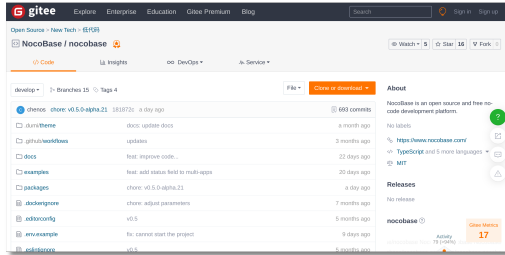


<https://gitlab.com>

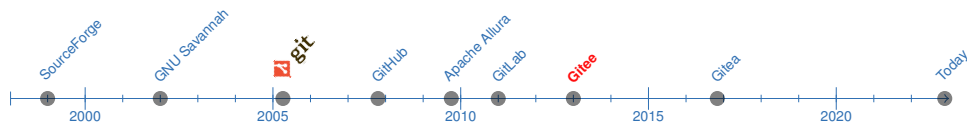
- Code written in Ruby and later parts in Go
- First version 2011
- GitLab.com since 2012
- Since July 2013: GitLab CE: Community Edition and GitLab EE: Enterprise Edition under the MIT License.
- February 2014 Gitlab EE changed to the “GitLab Enterprise Edition License”
- You can host your own instance
- Freemium model (Support, GitLab EE, CI minutes, ...)



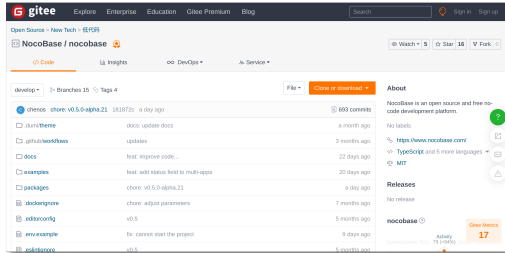
Gitee



<https://gitee.com>



Gitee

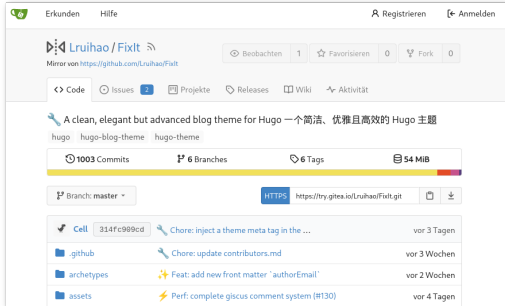


<https://gitee.com>

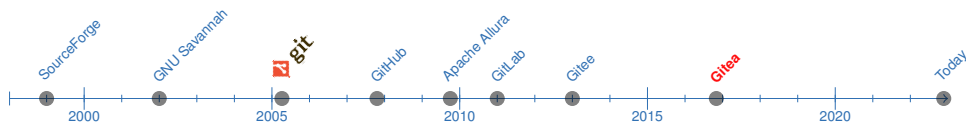
- “Chinese” GitHub
- Operator: Shenzhen AOSI Network Information Co., Ltd.
- Launched by Open Source China in 2013
- Since May 2020, Gitee has grown from 5 million registered users to 8 million (as of May 2022)



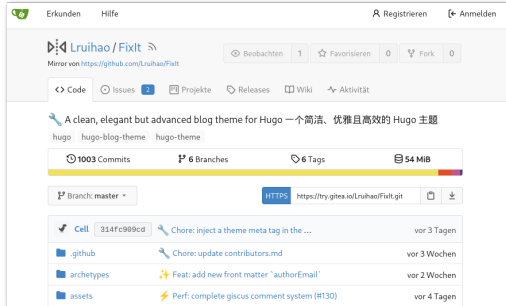
Gitea



<https://gitea.io>



Gitea



<https://gitea.io>

- Open-source forge software
- Written in go
- Came from a fork of Gogs in November of 2016 since it was under the control of a single maintainer. Users were frustrated.
- Design based on the old GitHub design
- Code hosted on GitHub:
<https://github.com/go-gitea/gitea>