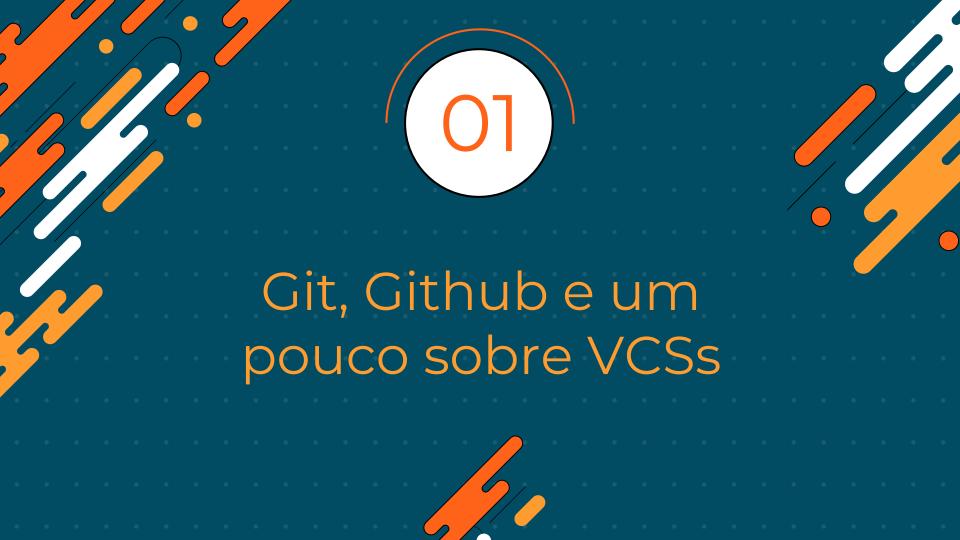
## GITHUB & VSCODE

Uma introdução



#### Version control

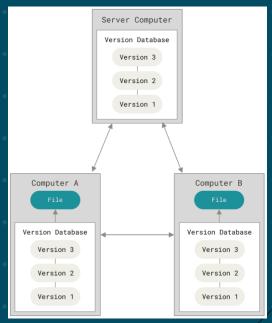
- Controle das mudanças ao longo do tempo
- Em um trabalho de grupo/time, várias versões de um mesmo produto podem coexistir
- Existem várias implementações em software de VCSs, como por exemplo Git, subversion, CVS, Mercurial



#### Git (Global Information Tracker)

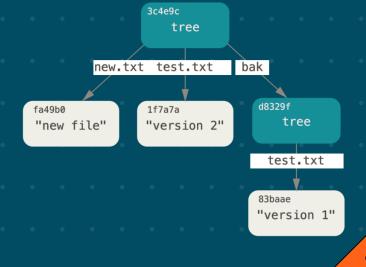
- Mais utilizado atualmente
- Mais especificamente é um tipo de Distributed Version Control System
- Todas as operações que são feitas em uma base de dados é totalmente independente de um servidor (em seu estado mais simples)
- Git foi concebido para ser utilizado em uma linha de comandos





#### Git (Global Information Tracker)

- Todas as alterações são validadas com um hash (SHA-1), que é calculada com base no conteúdo dos arquivos
- Tem uma integração grande com as Interfaces de desenvolvimento (IDEs) atualmente como o visual studio, spyder, eclipse, etc.





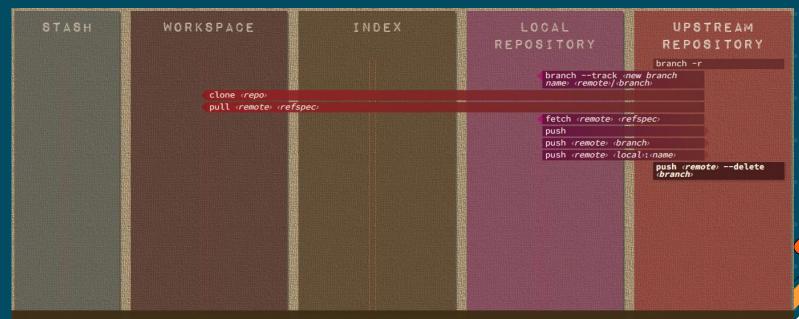




#### Workflow básico:

- I. You modify files in your working tree
- II. You selectively stage just those changes you want to be part of your next commit, which adds only those changes to the staging area
- III. You do a commit, which takes the files as they are in the staging area and stores that snapshot permanently to your Git directory

#### "Areas de trabalho"



#### upstream repository

A repository of your code to share and collaborate with other developers. It's hosted on some the Internet or a remote, eg. Github. The default name is origin. Typical branches here: main, master, shared-feature-x, release-y. Also called 'remote repository', or just 'remote'.

#### "Areas de trabalho"



#### local repository

A directory named .git that contains all of your necessary repository files — a Git repository skeleton. Typical branches: main, master, feature-x, bugfix-y. The local repository has exactly the same features and functionality as any other Git repository.

"Areas de trabalho"



#### index

A staging area for file changes to commit. Before you "commit" (or checkin) files, you need to first add them to the index. This is also called "current directory cache", "staging area", "cache" or "staged files".



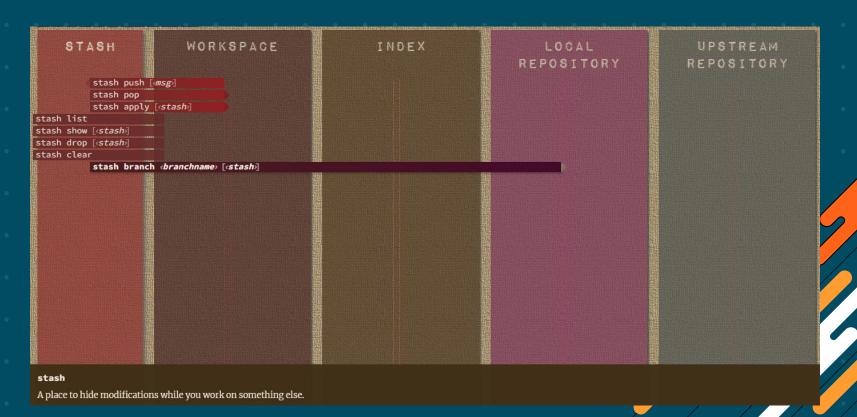
"Areas de trabalho"



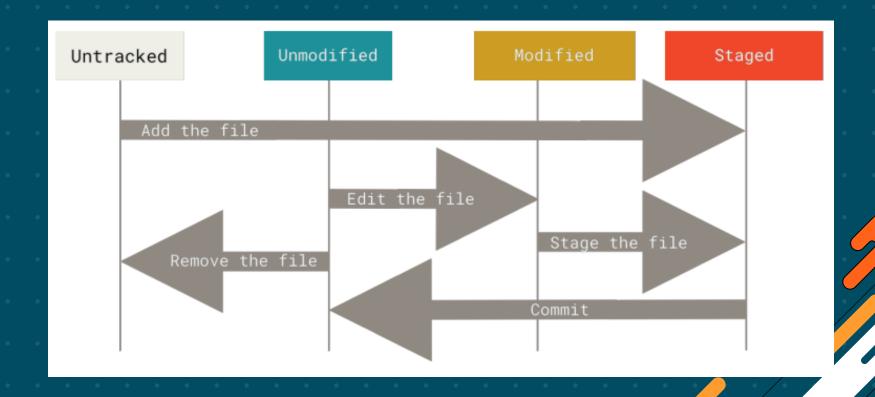
#### GIT GUD

#### Trabalhando com Git

"Areas de trabalho"



### A vida de um arquivo

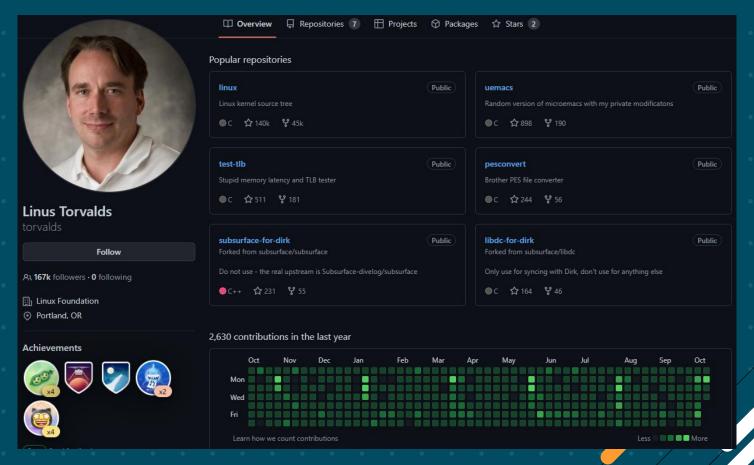


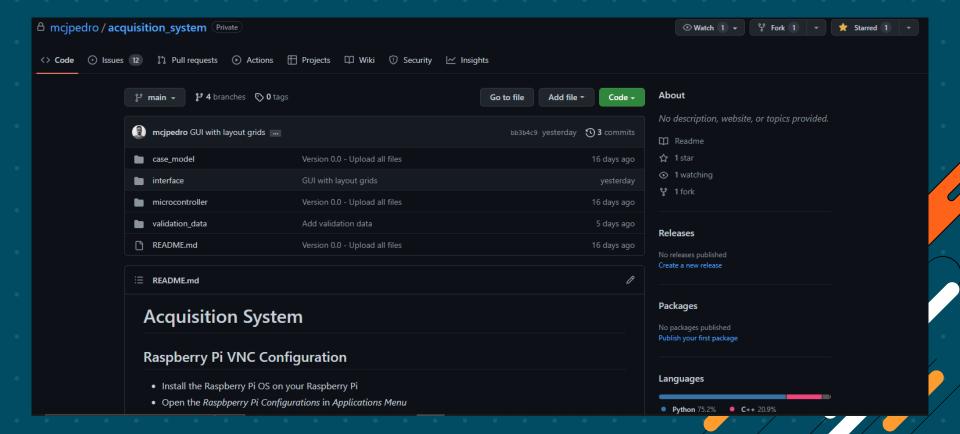




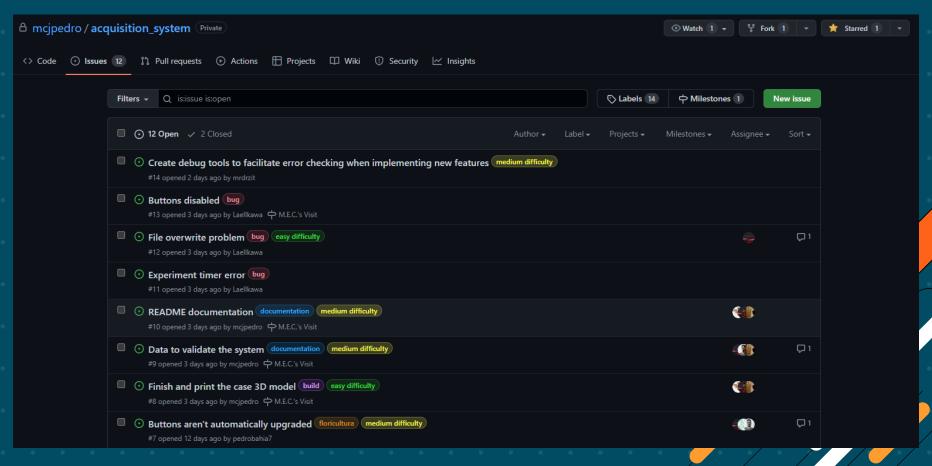
Where the world builds software

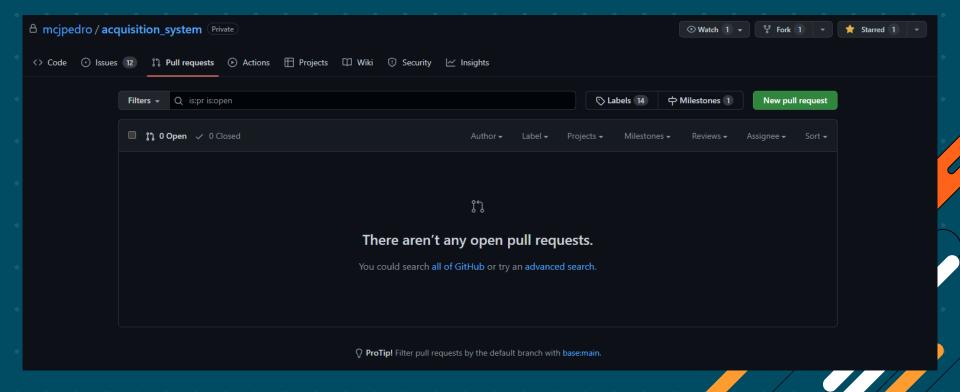
### Qual é a cara do GitHub?

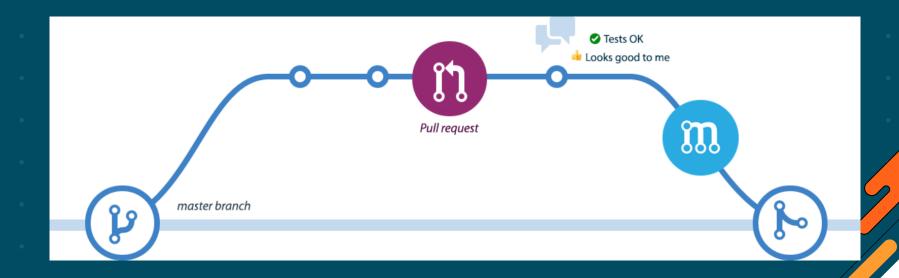


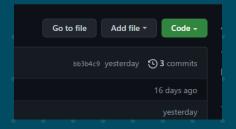


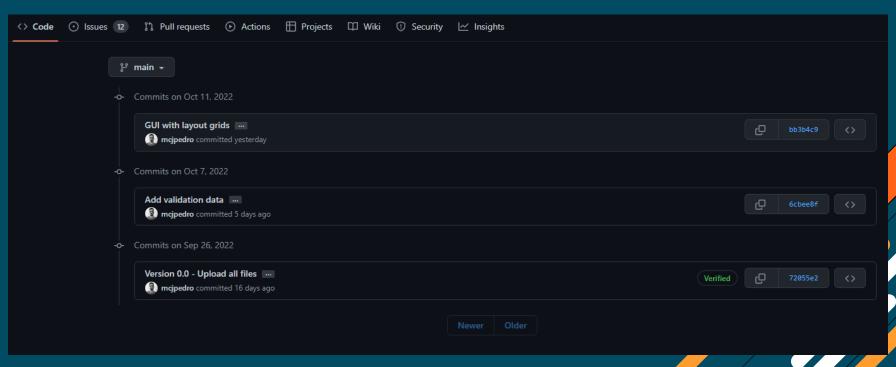
#### GIT GUD











	COMMENT	DATE
Q	CREATED MAIN LOOP & TIMING CONTROL	14 HOURS AGO
φ	ENABLED CONFIG FILE PARSING	9 HOURS AGO
<b>\rightarrow</b>	MISC BUGFIXES	5 HOURS AGO
þ	CODE ADDITIONS/EDITS	4 HOURS AGO
Q.	MORE CODE	4 HOURS AGO
Ò	HERE HAVE CODE	4 HOURS AGO
þ	AAAAAAAA	3 HOURS AGO
0	ADKFJSLKDFJSDKLFJ	3 HOURS AGO
¢	MY HANDS ARE TYPING WORDS	2 HOURS AGO
Ŷ	HAAAAAAAANDS	2 HOURS AGO

AS A PROJECT DRAGS ON, MY GIT COMMIT MESSAGES GET LESS AND LESS INFORMATIVE.

- O sucesso a longo prazo de um projeto depende bastante da sua legibilidade
- Para isso é importante que um código escrito há 1 ano possa ser revisado sem mais problemas, e de forma eficiente

	COMMENT	DATE
Q	CREATED MAIN LOOP & TIMING CONTROL	14 HOURS AGO
ф	ENABLED CONFIG FILE PARSING	9 HOURS AGO
þ	MISC BUGFIXES	5 HOURS AGO
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ÌÒ	HERE HAVE CODE	4 HOURS AGO
Ιþ	ARAAAAAA	3 HOURS AGO
¢	ADKFJ5LKDFJ5DKLFJ	3 HOURS AGO
þ	MY HANDS ARE TYPING WORDS	2 HOURS AGO
<b></b>	HAAAAAAAANDS	2 HOURS AGO

AS A PROJECT DRAGS ON, MY GIT COMMIT MESSAGES GET LESS AND LESS INFORMATIVE.

🎈 git log é seu amigo!

#### git log

Show recent commits, most recent on top. Options:

- --decorate with branch and tag names on appropriate commits
- --stat with stats (files changed, insertions, and deletions)
- --author=<author> only by a certain author
- --after="MMM DD YYYY" ex. (Jun 20 2008) only commits after a certain date
- --before="MMM DD YYYY" only commits that occur before a certain date
- --merge only the commits involved in the current merge conflicts

DEVELOPMENT

# How to Write a Git Commit Message

Commit messages matter. Here's how to write them well.



#### The seven rules of a great Git commit message

Keep in mind: This has all been said before.

- 1. Separate subject from body with a blank line
- 2. Limit the subject line to 50 characters
- 3. Capitalize the subject line
- 4. Do not end the subject line with a period
- 5. Use the imperative mood in the subject line
- 6. Wrap the body at 72 characters
- 7. Use the body to explain what and why vs. how

#### The seven rules of a great Git commit message

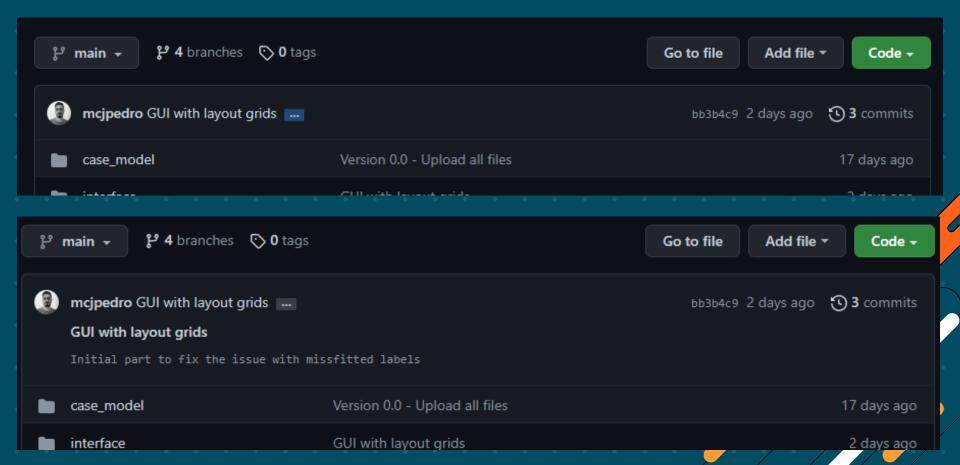
Keep in mind: This has all been said before.

- 1. Separate subject from body with a blank line
- 2. Limit the subject line to 50 characters
- 3. Capitalize the subject line
- 4. Do not end the subject line with a period
- 5. Use the imperative mood in the subject line
- 6. Wrap the body at 72 characters
- 7. Use the body to explain what and why vs. how

```
# Title: Summary, imperative, start upper case, don't end with a period
    more than 50 chars. #### 50 chars is here: #
# Remember blank line between title and body.
# Body: Explain *what* and *why* (not *how*). Include task ID (Jira issue).
# At the end: Include Co-authored-by for all contributors.
# Include at least one empty line before it. Format:
# Co-authored-by: name <user@users.noreply.github.com>
# How to Write a Git Commit Message:
# https://chris.beams.io/posts/git-commit/
# 1. Separate subject from body with a blank line
# 2. Limit the subject line to 50 characters
# 3. Capitalize the subject line
# 4. Do not end the subject line with a period
# 5. Use the imperative mood in the subject line
# 6. Wrap the body at 72 characters
# 7. Use the body to explain what and why vs. how
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch master
# Your branch is up to date with 'origin/main'.
# Changes to be committed:
       new file:
                  installation.md
```

#### GIT GUD

### Commits padronizados



#### 7. Use the body to explain what and why vs. how

This **commit from Bitcoin Core** is a great example of explaining what changed and why:

commit eb0b56b19017ab5c16c745e6da39c53126924ed6

<u>Author: Pieter Wuille pieter.wuille@gmail.com></code></u>

Date: Fri Aug 1 22:57:55 2014 +0200

Simplify serialize.h's exception handling

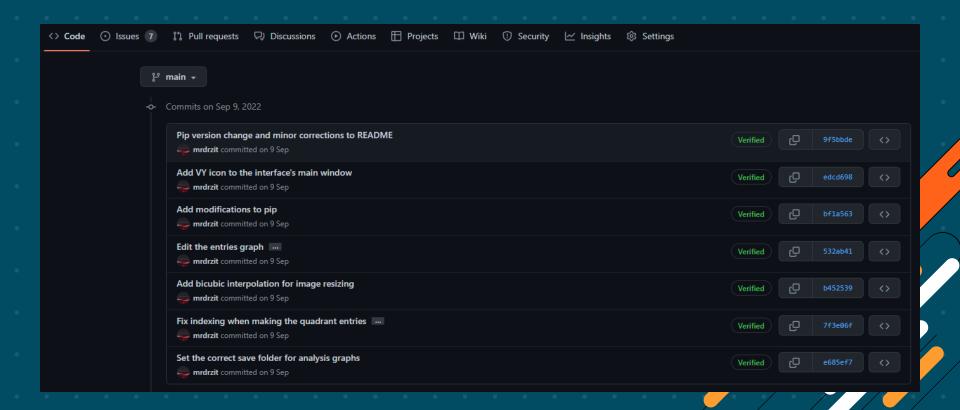
Remove the 'state' and 'exceptmask' from serialize.h's stream implementations, as well as related methods.

As exceptmask always included 'failbit', and setstate was always called with bits = failbit, all it did was immediately raise an exception. Get rid of those variables, and replace the setstate with direct exception throwing (which also removes some dead code).

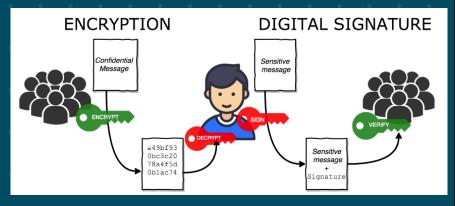
As a result, good() is never reached after a failure (there are only 2 calls, one of which is in tests), and can just be replaced by !eof().

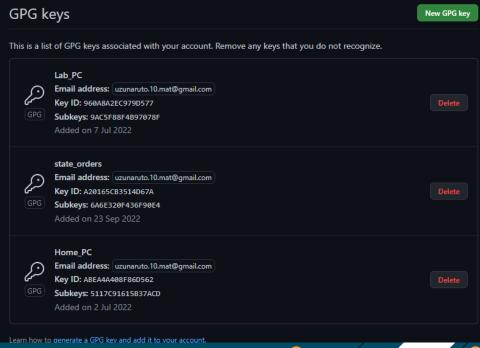
fail(), clear(n) and exceptions() are just never called. Delete
them.

#### Assinatura de commits



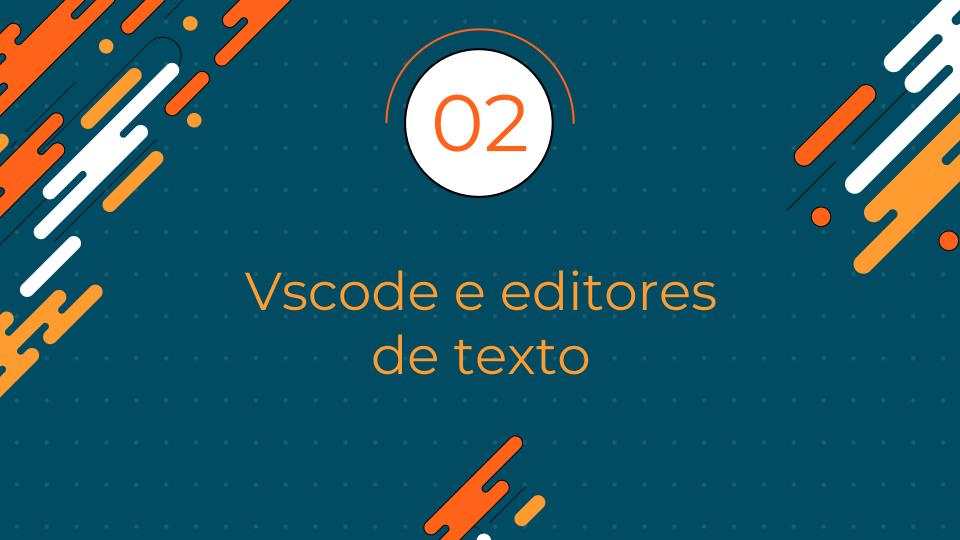
#### Assinatura de commits





#### Assinatura de commits

```
C:\Users\uzuna\.gitconfig - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
ቇሮΒΒΝΒΦ|Χββ|Νββ|Σββ|ΟΩ|Θ|Θ|ΒΘ|ΒΘ|<mark>=></mark>Υ<mark>--</mark>‹ΛΦβΛΕΘ|Θ|Ο□ΝΒβ|Βββ ΒΚΚ
         .gitmessage 🗵
 .gitconfig 🗵
    [core]
        editor = \"D:\\Installs\\Microsoft VS Code\\Code.exe\" --wait
      [user]
       name = mrdrzit
      email = uzunaruto.10.mat@gmail.com
        signingkey = ABEA4A408F86D562
      [gui]
        recentrepo = C:/Users/uzuna/Documents/Github Projects/Collabs/Behavython
  8
      [commit]
 10
       gpgsign = true
       template = C:\\Users\\uzuna\\.gitmessage
 11
 12
      [gpg]
        program = C:\\Program Files (x86)\\GnuPG\\bin\\gpg.exe
```



#### Text editor Software







Sublime Text
Proprietary



Atom MIT License



Notepad++ GNU Gener...



Emacs GNU Gener...



Brackets MIT License



TextMate GNU Gener...



GNU nano GNU Gener.



gedit GNU Gener.



Komodo Edit GNU Gener...



#### Integrated development environment Software



Visual Studio Proprietary ... Eclipse
Common P.



IntelliJ IDEA
Proprietary ...



Code::Blocks GNU Gener...



NetBeans Freeware



CodeLite GNU Gener...



Atom MIT License

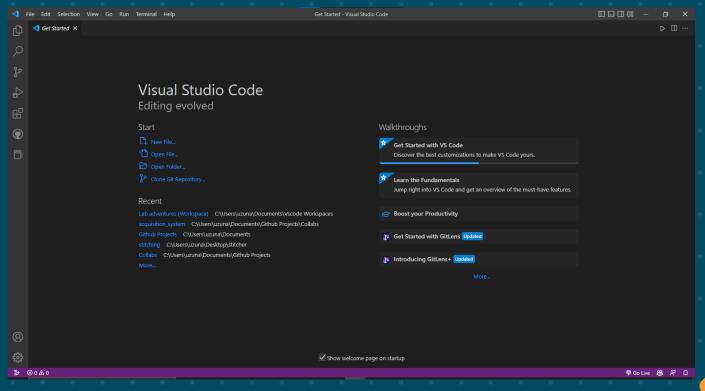


IDLE Python Soft...



BlueJ GNU Gener.









#### Meet IntelliSense.

Go beyond syntax highlighting and autocomplete with IntelliSense, which provides smart completions based on variable types, function definitions, and imported modules.

#### Print statement debugging is a thing of the past.

Debug code right from the editor. Launch or attach to your running apps and debug with break points, call stacks, and an interactive console.





#### Git commands built-in.

Working with Git and other SCM providers has never been easier. Review diffs, stage files, and make commits right from the editor. Push and pull from any hosted SCM service

#### Extensible and customizable.

Want even more features? Install extensions to add new languages, themes, debuggers, and to connect to additional services. Extensions run in separate processes, ensuring they won't slow down your editor. Learn more about



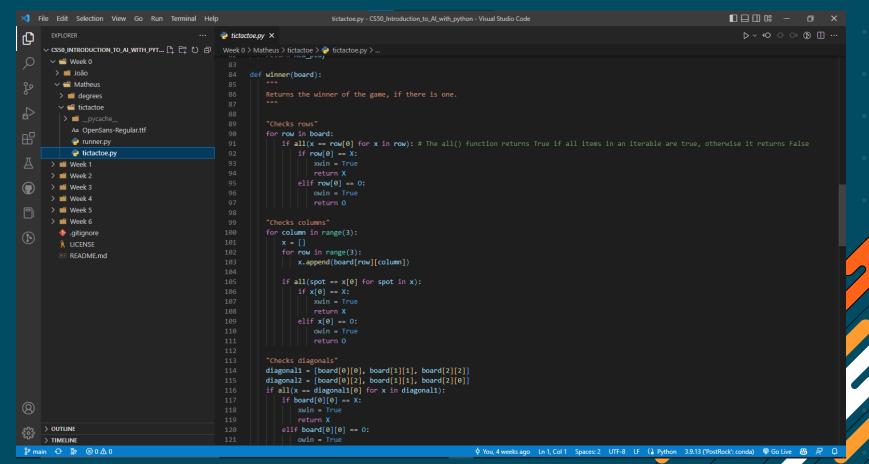


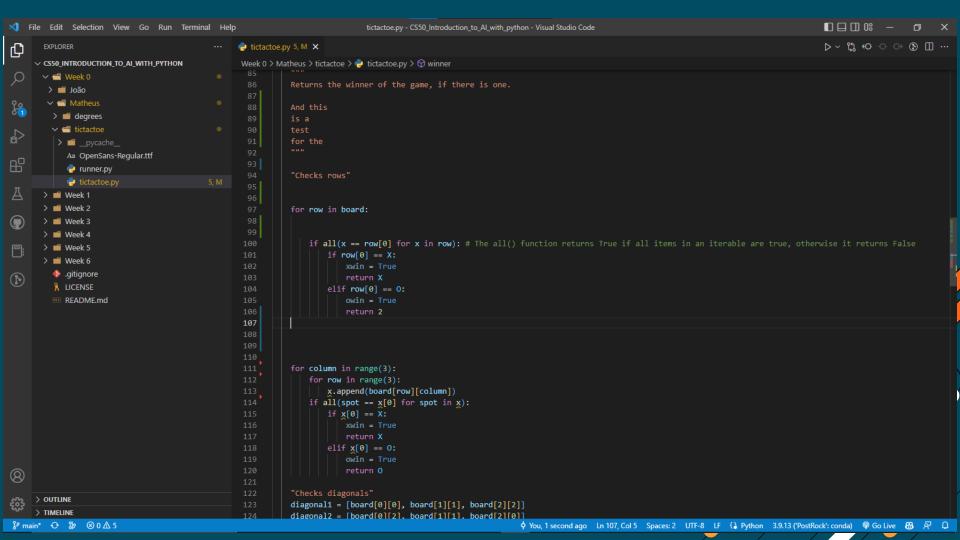


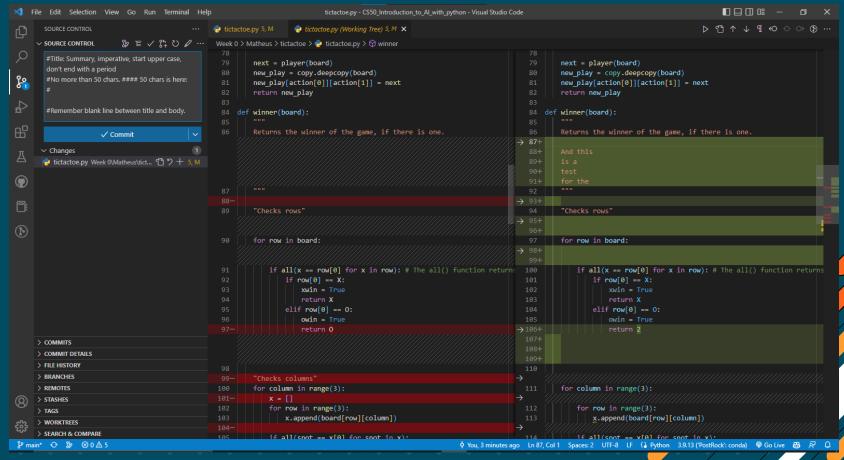


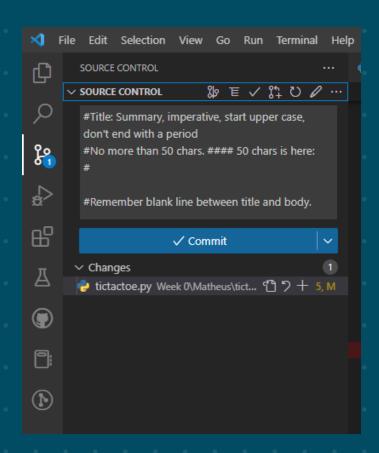


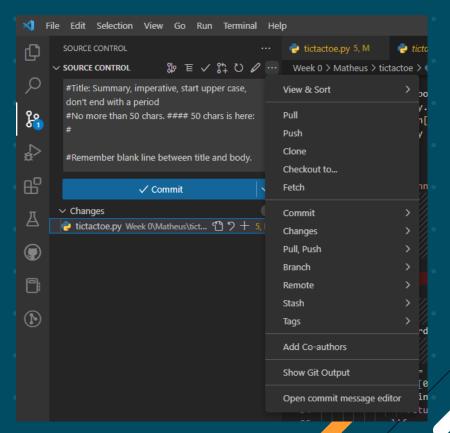


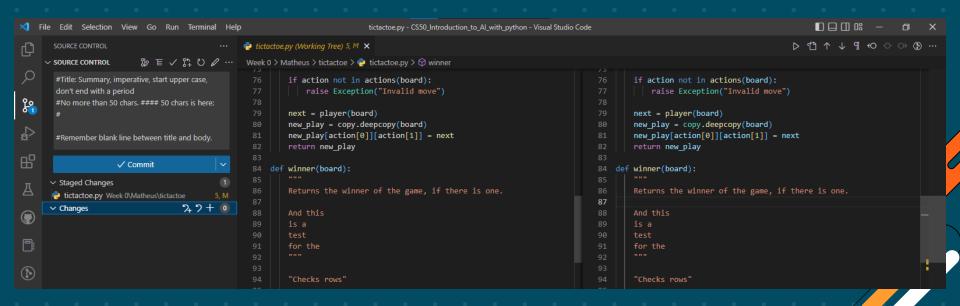




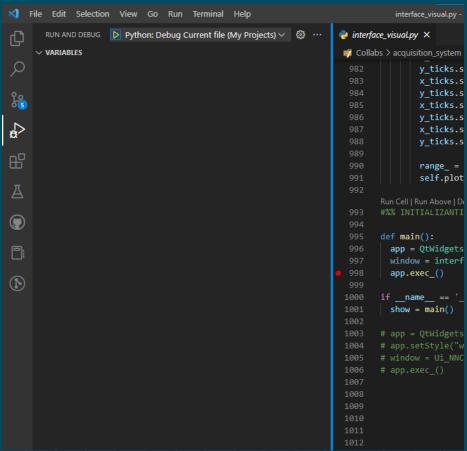




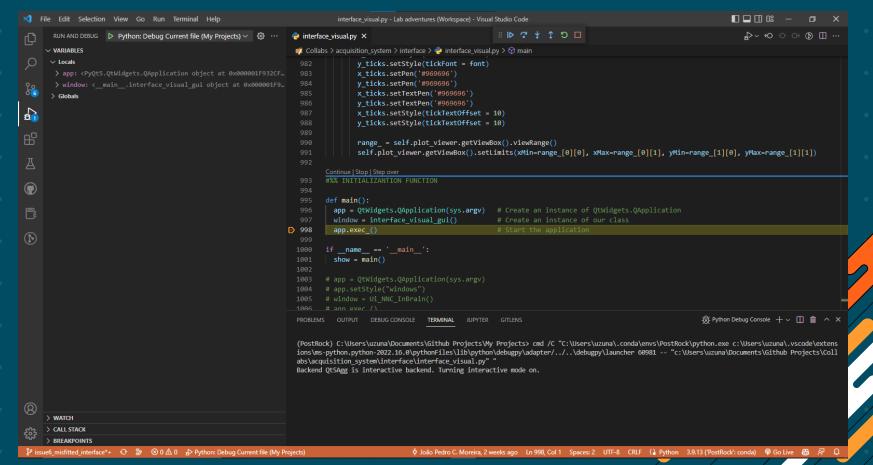




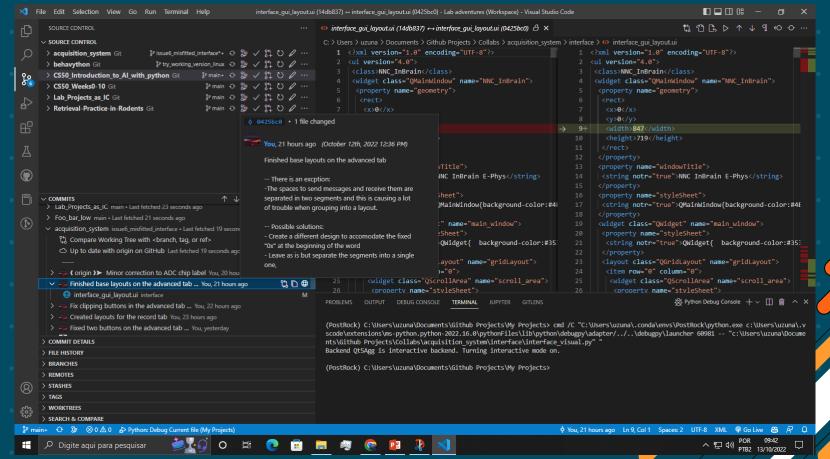
#### Deu pau, e agora?



#### Deu pau, e agora?

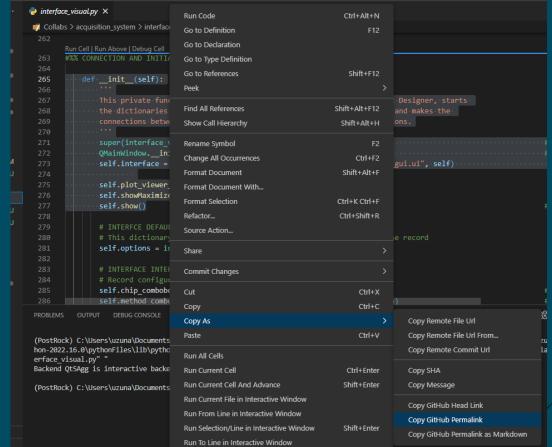


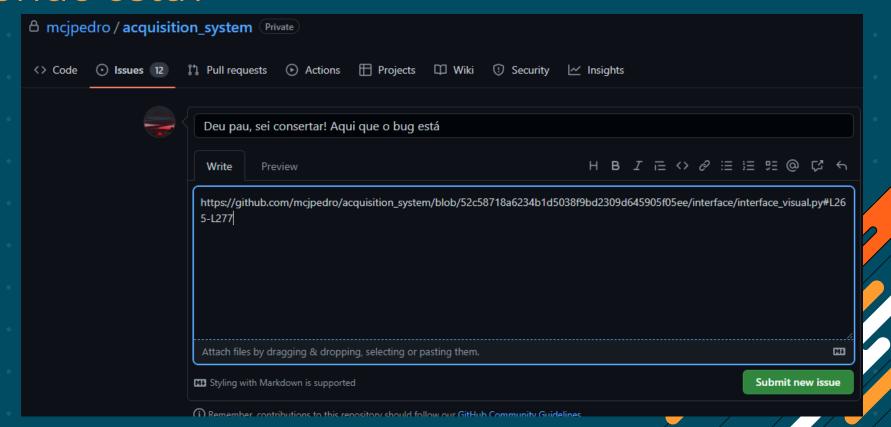
#### Deu pau, e agora?

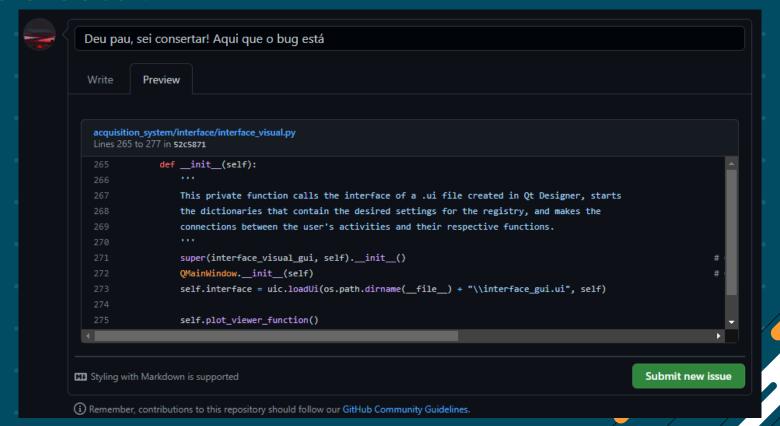


```
interface_visual.py - Lab adventures (Workspace) - Visual Studio Code
                                                                                                                                       interface_visual.py ×
🎁 Collabs > acquisition_system > interface > 🍦 interface_visual.py > 😭 interface_visual_qui
        Run Cell | Run Above | Debug Cell
        #%% CONNECTION AND INITIALIZATION FUNCTIONS
             def init (self):
  265
                 the dictionaries that contain the desired settings for the registry, and makes the
                  (class) QMainWindow | gui, self).__init__()
                 QMainWindow. init (self)
                 self.interface = uic.loadUi(os.path.dirname( file ) + "\\interface gui.ui", self)
                 self.plot viewer function()
                 self.showMaximized()
                 self.show()
                                                                                                                             # Shows the interface to the user
                 # INTERECE DEFAULT OPTIONS
                 # This distingary is the output variable of the interface to start
```

## Deu pau, sei consertar. Como mostrar onde está? \*\*\* interface\_visual.py \*\*\* | Run Code | Ctrl+Alt+N | Go to Definition | Go to Definition | F12







```
#%% CONNECTION AND INITIALIZATION FUNCTIONS
            def __init__(self):
Copy lines
                         te function calls the interface of a .ui file created in Qt Designer, starts
                         naries that contain the desired settings for the registry, and makes the
Copy permalink
                         s between the user's activities and their respective functions.
View git blame
                         rface_visual_gui, self).__init__()
                                                                                                                        # Calls the inherited classes __init__ method
Reference in new issue
                         ow.__init__(self)
                                                                                                                        # Creates the main window
               self.interface = uic.loadUi(os.path.dirname(__file__) + "\\interface_gui.ui", self)
                                                                                                                                                    # Loads the interface design archiv
               self.plot_viewer_function()
               self.showMaximized()
               self.show()
                                                                                                                        # Shows the interface to the user
```

### Extensões são o poder

### Your Al pair programmer

GitHub Copilot uses the OpenAl Codex to suggest code and entire functions in real-time, right from your editor.

Explore docs >

```
#!/usr/bin/env ts-node

import { fetch } from "fetch-h2";

// Determine whether the sentiment of text is positive

// Use a web service

async function isPositive(text: string): Promise

const response = await fetch(`http://text-processing.com/api/sentiment/`, {

method: "POST",

body: `text=${text}`,

headers: {

"Content-Type": "application/x-www-form-urlencoded",

};

const json = await response.json();

return json.label === "pos";

Copilot

Copilot
```