

O QUE É
**SISTEMA DE
VERSIONAMENTO**



QUEM SOU EU ?



**Leonardo Brito
Bittencourt**

leobittencourt

Web Developer

20 anos de idade
Ribeirão Preto - SP

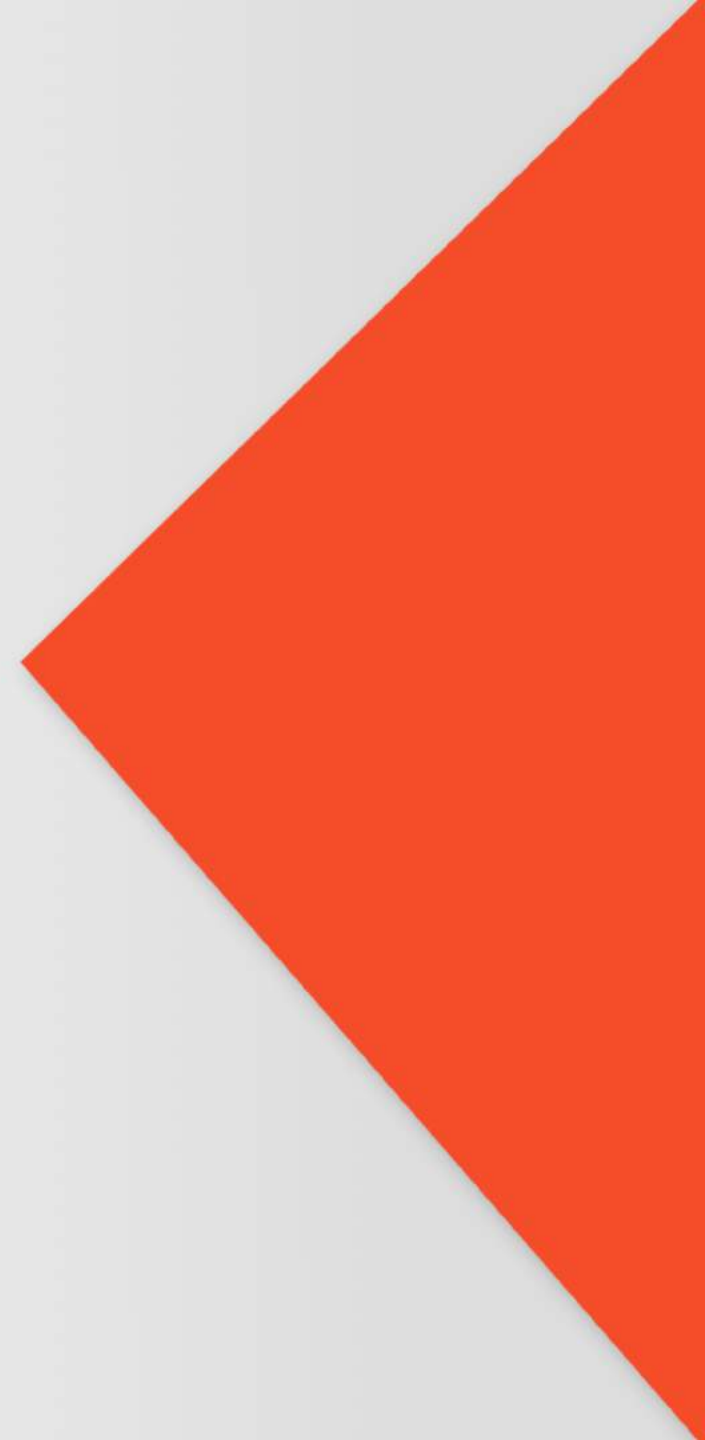
Atualmente sou Front-End no
Time de Inteligência Artificial do
Grupo SEB.

Trabalho atualmente com ReactJS,
ReactNative, NodeJS.



O QUE É CONTROLE DE VERSÃO ?

O controle de versão é um sistema que registra as mudanças feitas em um arquivo ou um conjunto de arquivos ao longo do tempo de forma que você possa recuperar versões específicas.



QUEM É GIT ?

É um sistema de controle de versões, usado principalmente no desenvolvimento de software.

O Git foi inicialmente projetado e desenvolvido por Linus Torvalds para o desenvolvimento do kernel Linux.



QUEM É GIT ?

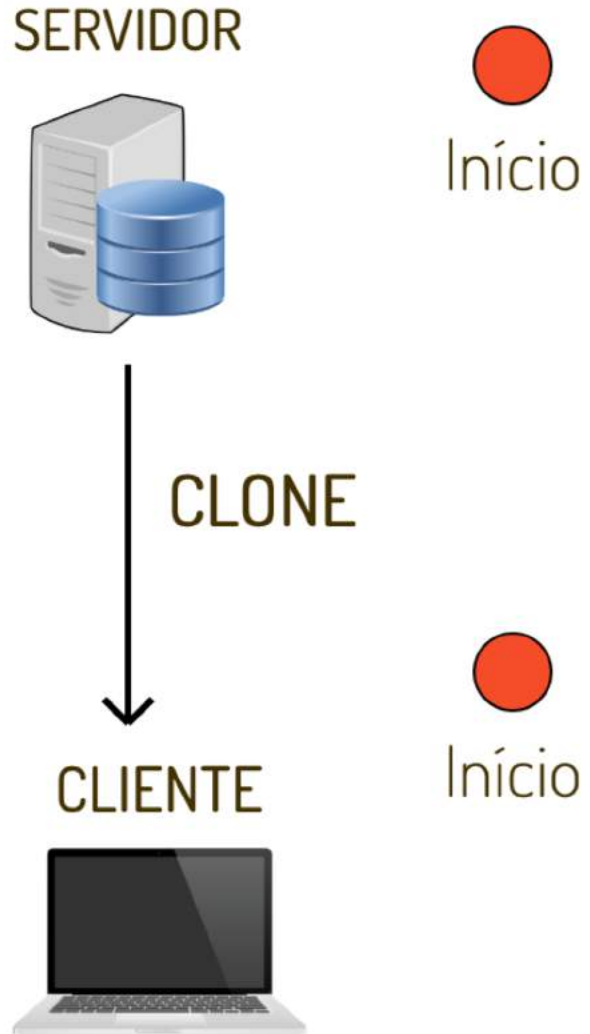
O Git é um software livre.

Sua manutenção é atualmente supervisionada por Junio Hamano.



Engenheiro de Software e
Hacker Japonês

COMO O GIT FUNCIONA ?



COMO O GIT FUNCIONA ?

SERVIDOR

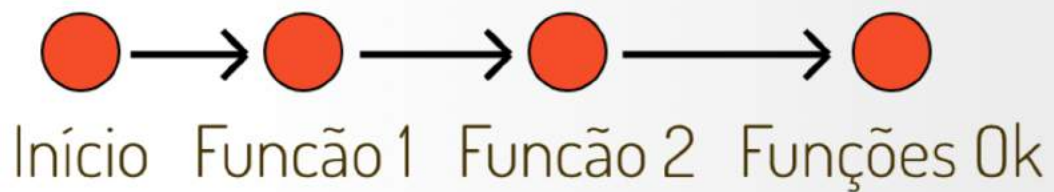


●
Início

CLONE



CLIENTE



COMO O GIT FUNCIONA ?

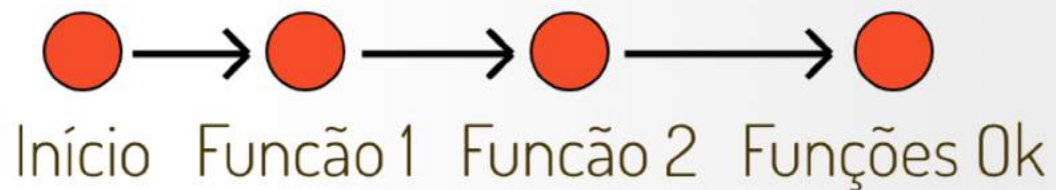
SERVIDOR



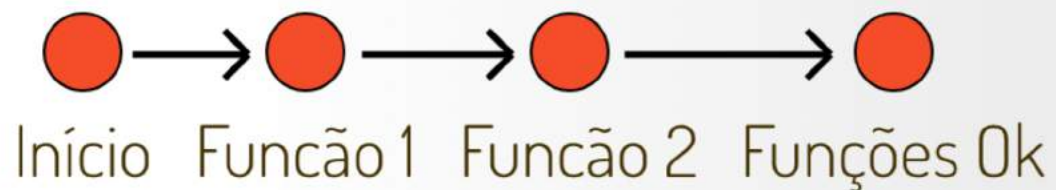
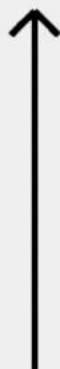
CLONE



CLIENTE



PUSH



COMO O GIT FUNCIONA ?

SERVIDOR



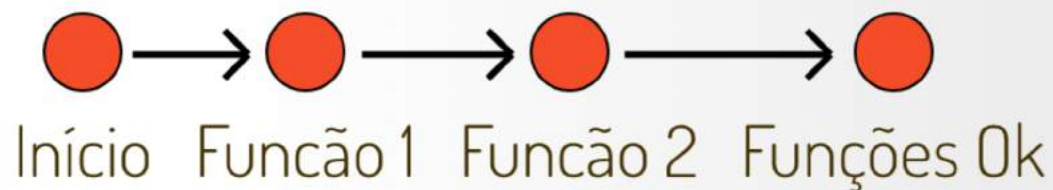
CLONE



CLIENTE



PUSH



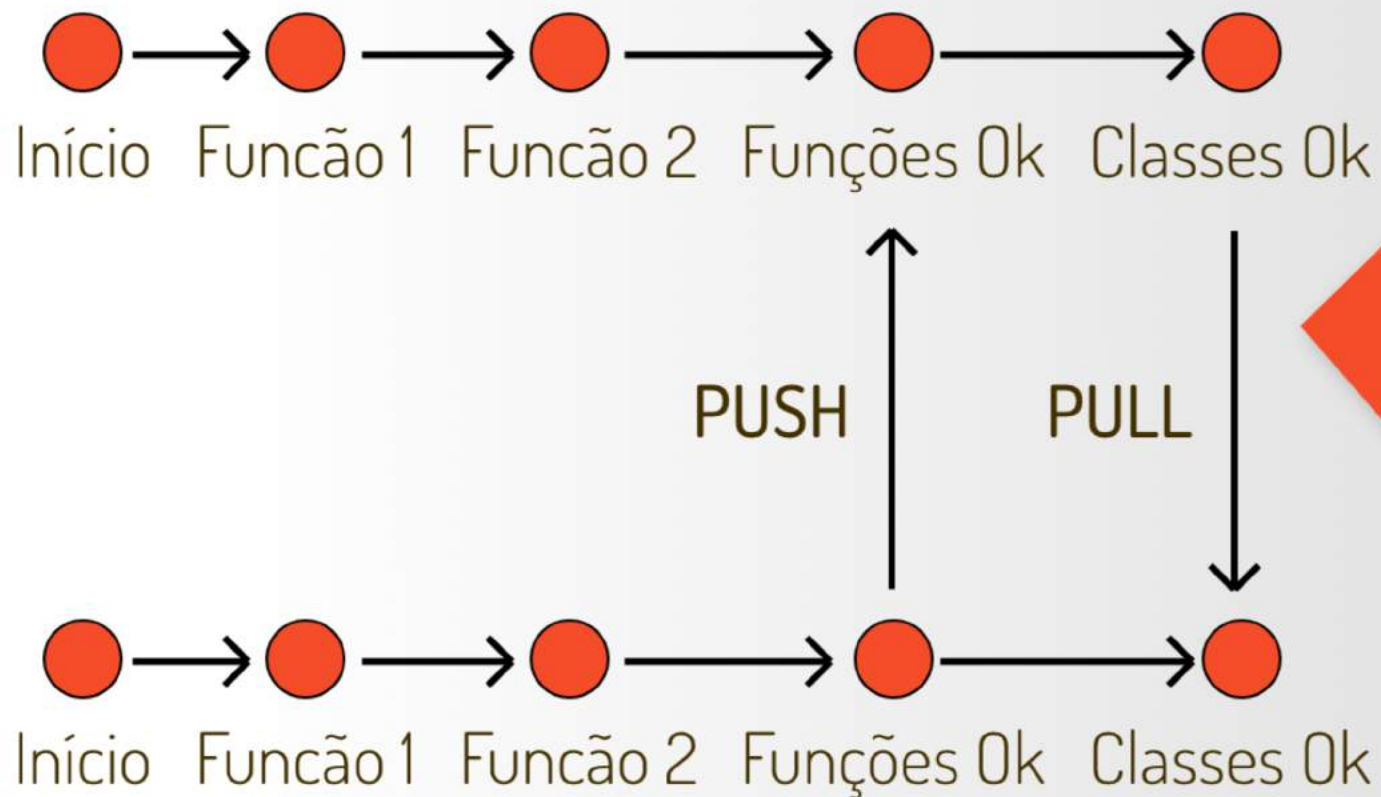
COMO O GIT FUNCIONA ?

SERVIDOR



CLONE

CLIENTE



TIPOS DE ESTADOS DE UM ARQUIVO

UNTRACKED

NÃO RASTREADO

UNMODIFIED

INALTERADO

STAGED

SELECIONADO

MODIFIED

MODIFICADO

NÃO RASTREADO

```
+ ~/Projects/PresentationGIT git init
Initialized empty Git repository in /Users/leonardo/Projects/PresentationGIT/.git/
+ ~/Projects/PresentationGIT master ls
+ ~/Projects/PresentationGIT master touch index.js
+ ~/Projects/PresentationGIT master git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

    index.js

nothing added to commit but untracked files present (use "git add" to track)
+ ~/Projects/PresentationGIT master
```

Novo arquivo que não foi rastreado pelo repositório

SELECCIONADO

```
+ ~/Projects/PresentationGIT } master± git add index.js
+ ~/Projects/PresentationGIT } master± git status

On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

    new file:   index.js

+ ~/Projects/PresentationGIT } master±
```

Archivo seleccionado

COMMIT

```
+ ~/Projects/PresentationGIT > master± git commit -m "arquivo index criado"
[master (root-commit) 0d17c0d] arquivo index criado
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 index.js
+ ~/Projects/PresentationGIT > master git status
On branch master
nothing to commit, working tree clean
+ ~/Projects/PresentationGIT > master
```

Executado um commit para enviar o novo arquivo criado

ARQUIVO ALTERADO

```
+ ~/Projects/PresentationGIT master nano index.js
+ ~/Projects/PresentationGIT master± git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   index.js

no changes added to commit (use "git add" and/or "git commit -a")
+ ~/Projects/PresentationGIT master±
```

Arquivo alterado detectado

COMMIT DA ALTERAÇÃO

```
+ ~/Projects/PresentationGIT master± git add .
+ ~/Projects/PresentationGIT master± git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    modified:   index.js

+ ~/Projects/PresentationGIT master± git commit -m "alteração feita no index"
[master 6066348] alteração feita no index
1 file changed, 1 insertion(+)
+ ~/Projects/PresentationGIT master
```

Executado commit para enviar alteração do arquivo

CLONAR REPOSITORIO

```
git clone <repo>
```

Clona o repositório <repo> para a máquina local.

```
+ ~/Projects/PresentationGIT ➤ git clone https://github.com/leobittencourt/GerenciamentoDeVeiculos.git
Cloning into 'GerenciamentoDeVeiculos'...
remote: Enumerating objects: 62, done.
remote: Counting objects: 100% (62/62), done.
remote: Compressing objects: 100% (40/40), done.
remote: Total 62 (delta 21), reused 53 (delta 16), pack-reused 0
Unpacking objects: 100% (62/62), done.
+ ~/Projects/PresentationGIT ➤ ls
GerenciamentoDeVeiculos
+ ~/Projects/PresentationGIT ➤ cd GerenciamentoDeVeiculos
+ Projects/PresentationGIT/GerenciamentoDeVeiculos ➤ master
```


INICIALIZAR REPOSITÓRIO

git init

Transforma o diretório atual em um repositório git, criando o subdiretório “.git”

```
+ ~/Projects/PresentationGIT ➤ git init
Initialized empty Git repository in /Users/leonardo/Projects/PresentationGIT/.git/
+ ~/Projects/PresentationGIT ➤ master ➤ l
total 0
drwxr-xr-x  3 leonardo  staff   96B Oct 15 23:06 .
drwxr-xr-x 17 leonardo  staff  544B Oct 15 23:05 ..
drwxr-xr-x 10 leonardo  staff  320B Oct 15 23:06 .git
+ ~/Projects/PresentationGIT ➤ master ➤
```


SELECIONAR ARQUIVOS

```
git add .
```

Seleciona todos os arquivos que ainda não foram rastreados pelo repositório

```
+ ~/Projects/PresentationGIT master touch routes.js
+ ~/Projects/PresentationGIT master git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

    routes.js

nothing added to commit but untracked files present (use "git add" to track)
+ ~/Projects/PresentationGIT master git add .
+ ~/Projects/PresentationGIT master git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   routes.js

+ ~/Projects/PresentationGIT master
```

COMMIT

```
git commit -m "outro commit"
```

Realiza o commit com a mensagem "outro commit"

```
+ ~/Projects/PresentationGIT master± git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   routes.js

+ ~/Projects/PresentationGIT master± git commit -m "outro commit"
[master 5d782e0] outro commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 routes.js
+ ~/Projects/PresentationGIT master
```

REPOSITÓRIO GITHUB

leobittencourt / Presentation-GIT

Watch 0

Star 0

Fork 0

Code

Issues 0

Pull requests 0

Projects 0

Wiki

Insights

Settings

Presentation-GIT

Edit

Manage topics

1 commit

1 branch

0 releases

1 contributor

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

leobittencourt Initial commit

Latest commit 1f6d1ad just now

LICENSE

Initial commit

just now

README.md

Initial commit

just now

README.md

Presentation-GIT

Presentation-GIT

“LINKAR” REPOSITÓRIO LOCAL COM REMOTO

```
git remote add origin <repo>
```

Adiciona um repositório remoto como origin no meu repositório local.

```
+ ~/Projects/PresentationGIT } master git remote add origin https://github.com/leobittencourt/Presentation-GIT.git
+ ~/Projects/PresentationGIT } master git remote -v
origin https://github.com/leobittencourt/Presentation-GIT.git (fetch)
origin https://github.com/leobittencourt/Presentation-GIT.git (push)
+ ~/Projects/PresentationGIT } master
```


BAIXAR ATUALIZAÇÕES

```
git pull origin <branch>
```

Baixar atualizações do repositório remoto

```
x + ~/Projects/PresentationGIT master git pull origin master
From https://github.com/leobittencourt/Presentation-GIT
 * branch          master      -> FETCH_HEAD
fatal: refusing to merge unrelated histories
x + ~/Projects/PresentationGIT master
```


LISTAR BRANCHS

```
git branch [-a]
```

Lista todas as branch que você possui em sua máquina
[-a] Lista todas as branch disponíveis no repositório

```
x + ~/Projects/PresentationGIT > master > git branch
* master
+ ~/Projects/PresentationGIT > master > git branch -a
* master
  remotes/origin/master
+ ~/Projects/PresentationGIT > master >
```

“SUBIR” ATUALIZAÇÕES

```
git push origin <branch>
```

Envia as atualizações para o seu repositório remoto

```
+ ~/Projects/Presentation-GIT master touch index.js
+ ~/Projects/Presentation-GIT master± git add .
+ ~/Projects/Presentation-GIT master± git commit -m "add index.js"
[master 96c5fa3] add index.js
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 index.js
+ ~/Projects/Presentation-GIT master git push origin master
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 324 bytes | 324.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/leobittencourt/Presentation-GIT.git
1f6d1ad..96c5fa3 master -> master
+ ~/Projects/Presentation-GIT master
```

CRIAR NOVO BRANCH

```
git checkout -b <nome>
```

Criar um novo branch a partir do branch atual realizando uma cópia idêntica preservando o branch anterior

```
+ ~/Projects/Presentation-GIT > master > git branch
* master
+ ~/Projects/Presentation-GIT > master > git checkout -b funcao-soma
Switched to a new branch 'funcao-soma'
+ ~/Projects/Presentation-GIT > funcao-soma > ls
LICENSE  README.md index.js
+ ~/Projects/Presentation-GIT > funcao-soma >
```


MUDAR DE BRANCH

```
git checkout master
```

Mudar da branch funcho-soma para o branch master, com isso todos os respectivos arquivos são carregados

```
+ ~/Projects/Presentation-GIT > funcao-soma > git checkout master  
Switched to branch 'master'  
Your branch is up to date with 'origin/master'.  
+ ~/Projects/Presentation-GIT > master > |
```

APAGAR BRANCH

```
git branch -d [-D] <nome>
```

Apaga o branch especificado que já foi mesclado
[-D] Força remover o branch mesmo que não tenha sido mesclado

```
+ ~/Projects/Presentation-GIT > master git branch
funcao-soma
* master
+ ~/Projects/Presentation-GIT > master git branch -d funcao-soma
Deleted branch funcao-soma (was 96c5fa3).
+ ~/Projects/Presentation-GIT > master git branch
* master
+ ~/Projects/Presentation-GIT > master
```


VERIFICAR DIFERENÇAS ENTRE BRANCH

```
git diff <branch1> <branch2>
```

Verificar diferenças entre ramos

```
diff --git a/index.js b/index.js
index e69de29..e121465 100644
--- a/index.js
+++ b/index.js
@@ -0,0 +1 @@
+const soma = (a, b) => a + b;
(END)
```

MESCLANDO BRANCH

```
git merge <branch>
```

Realizará a mesclagem do branch especificado para o branch atual

[—no-ff] Obrigatoriamente adiciona uma mensagem de mesclagem para melhorar visualização no log

```
+ ~/Projects/Presentation-GIT ➤ master ➤ git merge --no-ff funcao-soma
```

MESCLANDO BRANCH

Mensagem para especificar mesclagem

```
Merge branch 'funcao-soma'
```

```
# Please enter a commit message to explain why this merge is necessary,  
# especially if it merges an updated upstream into a topic branch.
```

```
#
```

```
# Lines starting with '#' will be ignored, and an empty message aborts  
# the commit.
```

```
~
```

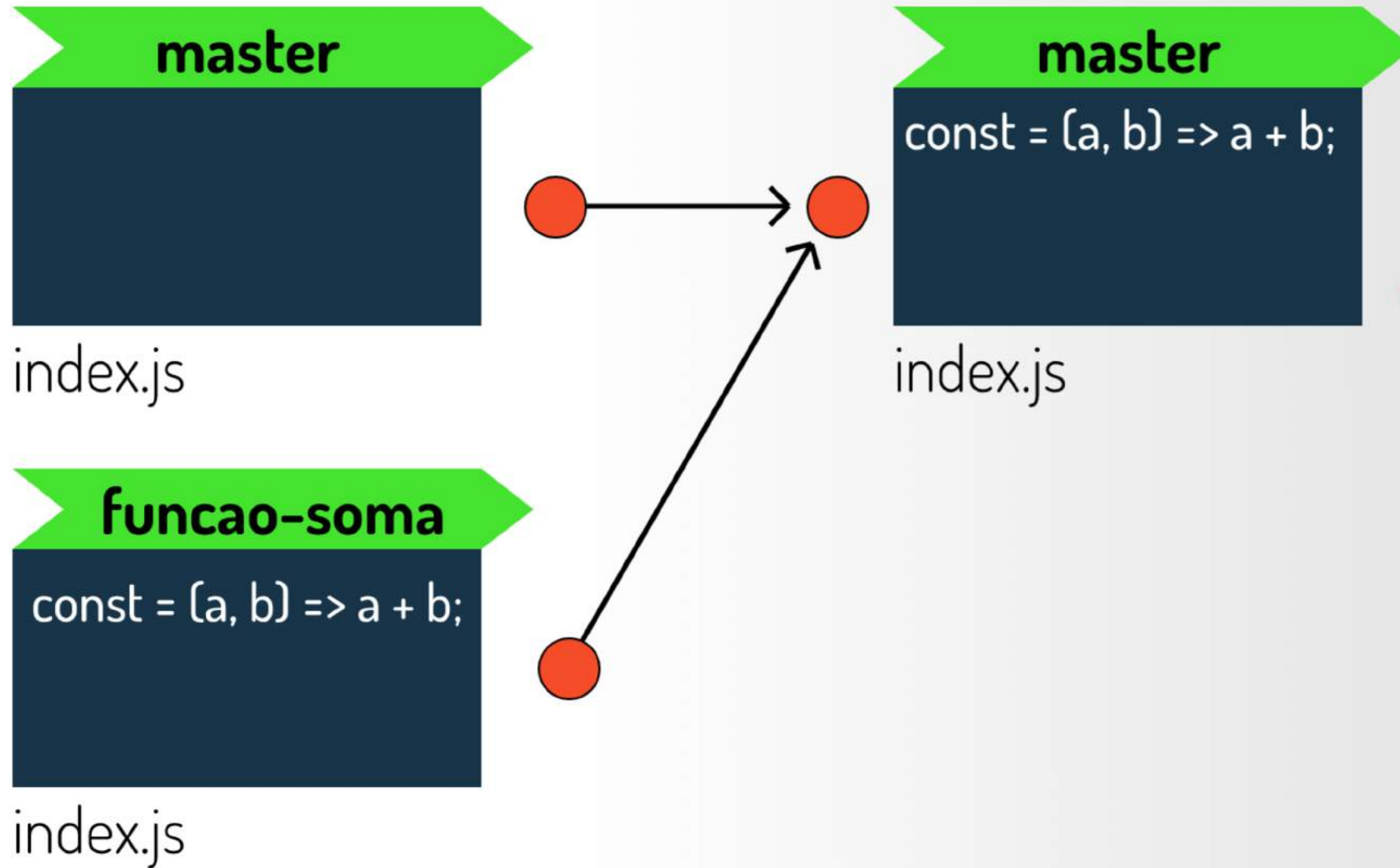
```
~
```

MESCLANDO BRANCH

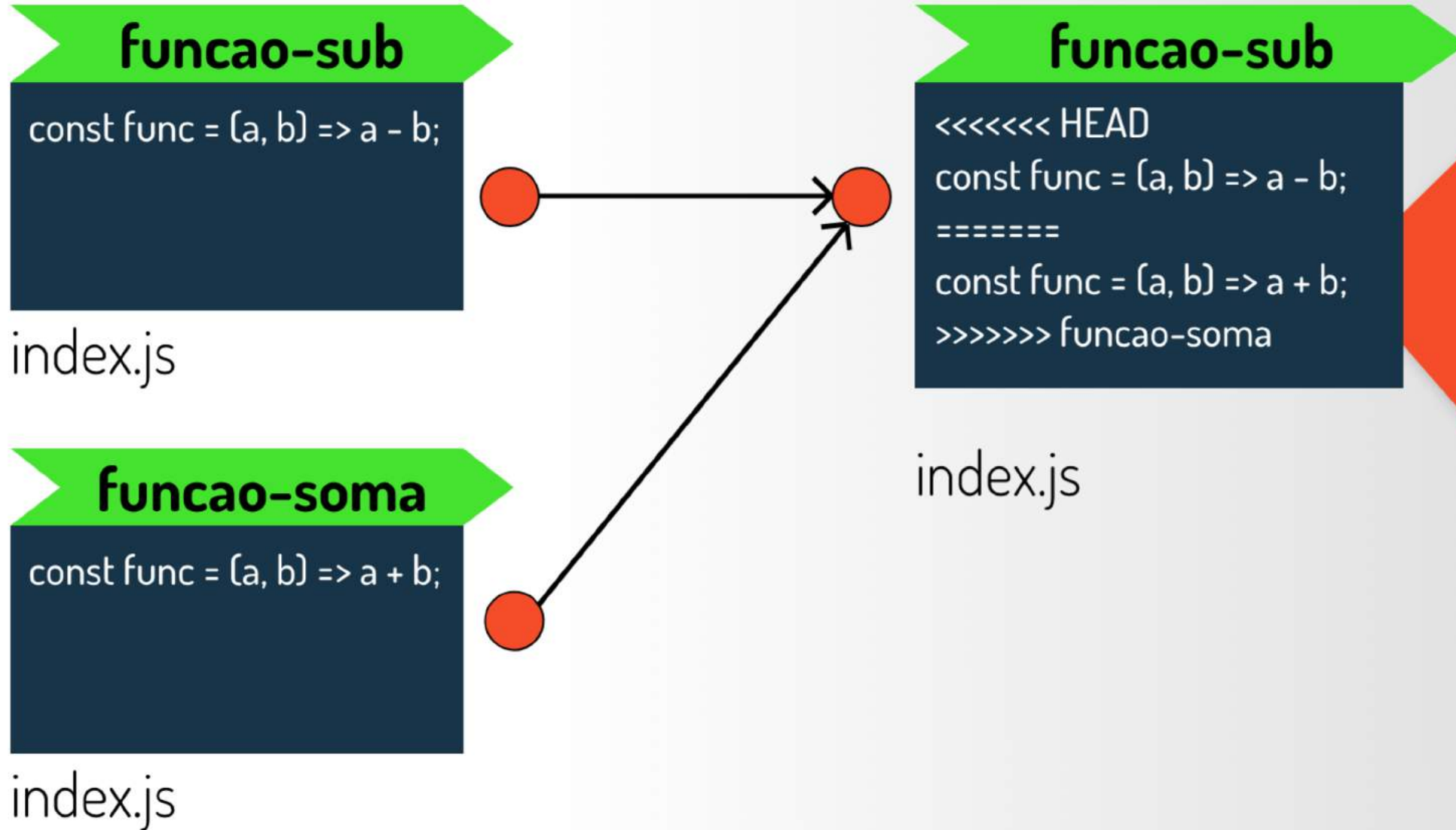
Verificando se a mesclagem foi realizada com sucesso

```
+ ~/Projects/Presentation-GIT > master git merge --no-ff funcao-soma
Merge made by the 'recursive' strategy.
index.js | 1 +
1 file changed, 1 insertion(+)
+ ~/Projects/Presentation-GIT > master cat index.js
const soma = (a, b) => a +b;
+ ~/Projects/Presentation-GIT > master
```


MESCLANDO BRANCH

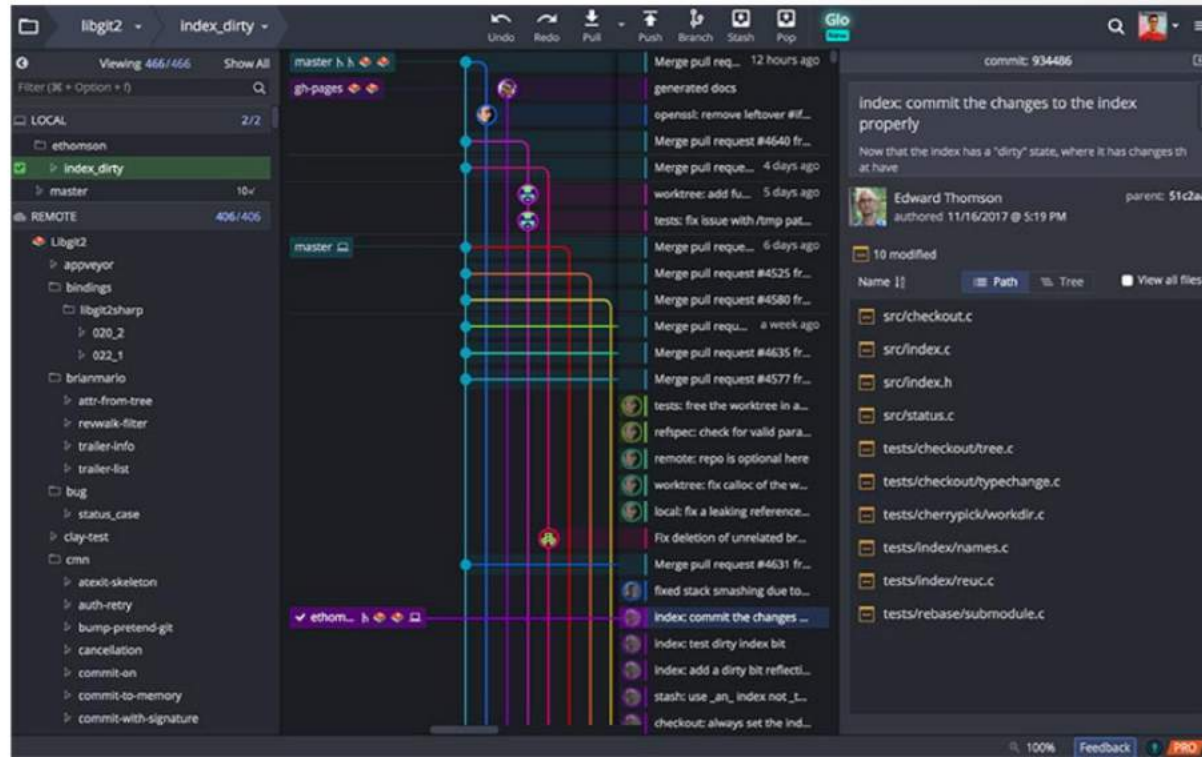


MESCLANDO BRANCH



RESOLVENDO CONFLITOS

- Alterando o arquivo manualmente
- IDEs (Visual Studio, WebStorm), Editores de Textos
- Ferramentas gráficas (GitKraken, por exemplo)



OBRIGADO!

Contato ?

leonardobritobittencourt@gmail.com