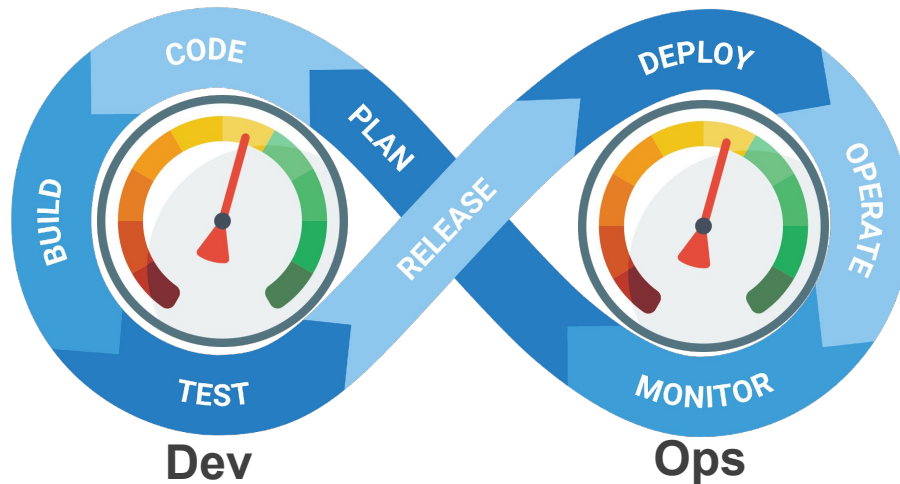




UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE  
CENTRO DE CIÊNCIAS EXATAS E DA TERRA  
DEPARTAMENTO DE INFORMÁTICA E MATEMÁTICA APLICADA  
PROGRAMA DE PÓS-GRADUAÇÃO EM SISTEMAS E COMPUTAÇÃO



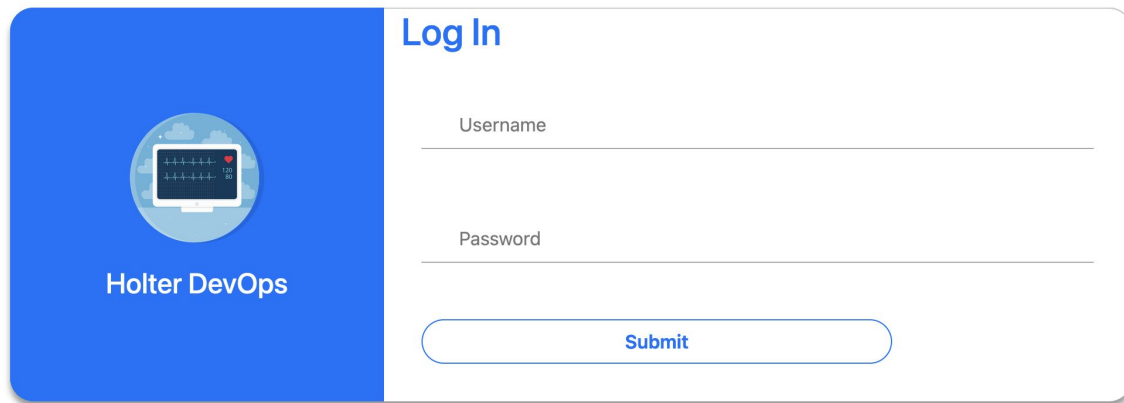
## Metric Suite Dashboard Tool

---

Jadson Santos  
jadson.santos@ufrn.br

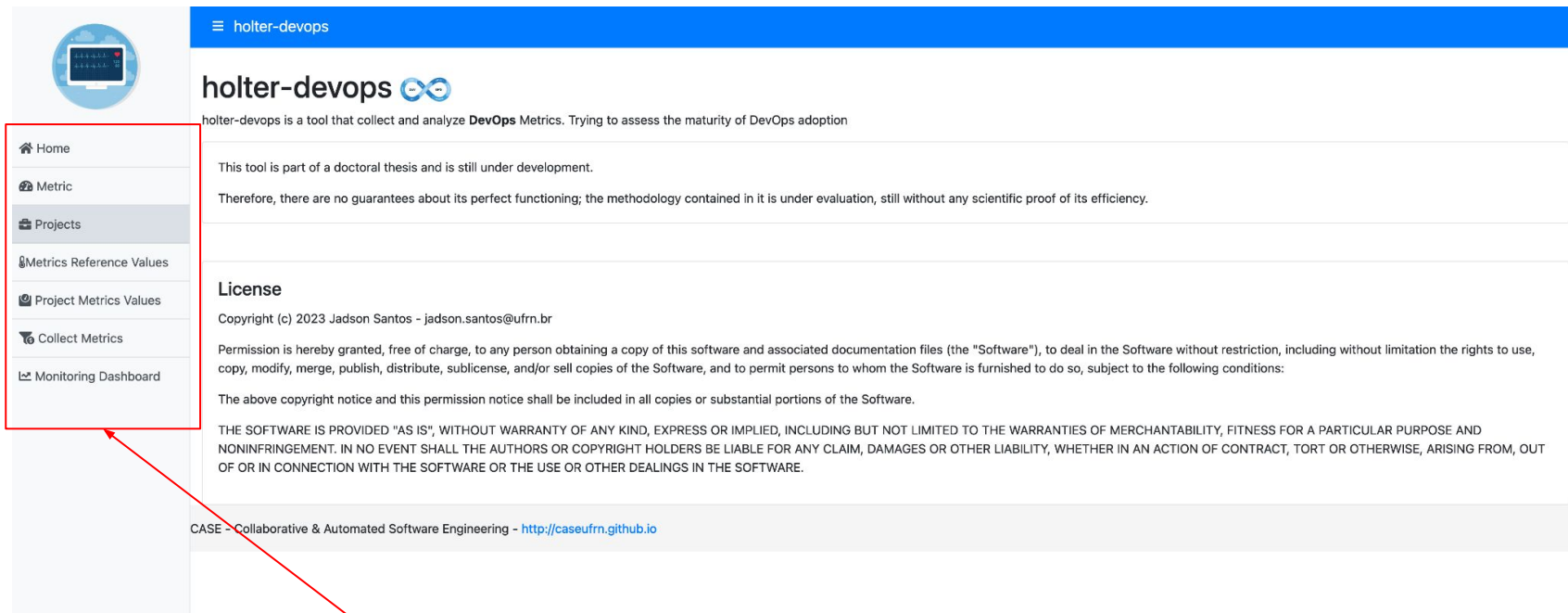
# Login

- Para o estudo, o dashboard terá uma tela de login. Limitar o acesso às pessoas que participarão do estudo.
- O Login pode ser desativado e o dashboard ficar disponível para toda a equipe de desenvolvimento



The image shows a mockup of a login interface. On the left, there is a blue vertical panel with a circular icon containing a laptop and a line graph, with the text 'Holter DevOps' below it. To the right of this panel is a white rounded rectangle containing the title 'Log In' in blue. Below the title are two input fields: 'Username' and 'Password'. At the bottom of the white rectangle is a blue rounded button with the text 'Submit'.

# Tela Inicial



**holter-devops**

holter-devops is a tool that collect and analyze **DevOps** Metrics. Trying to assess the maturity of DevOps adoption

This tool is part of a doctoral thesis and is still under development.

Therefore, there are no guarantees about its perfect functioning; the methodology contained in it is under evaluation, still without any scientific proof of its efficiency.

### License

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**Menu lateral com as opções da ferramenta**

# Métricas

- Métrica suportadas pela ferramenta com suas definições e fórmulas de cálculo



Home

**Metric**

Projects

Metrics Reference Values

Collect Metrics

Monitoring Dashboard

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## List of Metric

List of All supported metrics

Metrics


Name	Stage	Category	Team	Unit	Description	Formula
Coverage	CI	RESILIENCE	DEV	%	It is a measure used to describe the degree to which the source code of a program is executed when a particular test suite runs. To practice good CI, the project should have good testing quality	% LINES_OF_CODE WITH TEST
Build Duration	CI	PRODUCTIVITY	DEV	minutes	It is a measure used to describe the time spend to execute a build. To practice good CI, the builds should run fast to have fast feedbacks.	MEAN ( BUILD.FINISHED_AT - BUILD.STARTED_AT )
Build Activity	CI	PRODUCTIVITY	DEV	0..1	It is a measure used to describe the percente of day with builds. To practice good CI, the project should make constant builds.	COUNT DAYS_WITH_BUILDS / COUNT DAYS
Time to Fix a Broken Build	CI	PRODUCTIVITY	DEV	hours	It is a measure used to describe the time to fix a build that was broken. To practice good CI, failed builds should be fixed quickly.	MEAN ( BUILD.FIXED_AT - BUILD.FAILED_AT )

## Métricas

- Nestes estudo de caso, vamos avaliar 7 práticas (métricas) de CI
  - **Build Duration**: Para um bom CI, as builds deveria ser rápidas, para um rápido feedback para os desenvolvedores.
  - **Build Activity**: Para um bom CI, o projeto deveria ter builds frequentes
  - **Commits per Day**: Para um bom CI, os desenvolvedores deveriam fazer commits constantes
  - **Build Health**: Para um bom CI, as builds do projeto deveriam falhar pouco
  - **Time to Fix Broken Build**: Para um bom CI, as builds com falhas deveriam ser consertadas rapidamente.
  - **Coverage**: Para um bom CI, o projeto deveria ter uma quantidade boa de testes
  - **Comments Per Change**: Para um bom CI, os desenvolvedores deveriam ter boa comunicação

# Cadastro de Projetos

- A ferramenta permite monitorar vários projetos ao mesmo tempo
- Nessa opção são definidas as configurações para coletar as métricas



- Home
- Metric
- Projects**
- Metrics Reference Values
- Project Metrics Values
- Collect Metrics
- Monitoring Dashboard

holter-devops

## Project

List of Projects save in the tool to collect CI metric information.

[+ New Project](#)

List of Projects


Name	Organization	Active	Actions
baseimd	desenvolvimento	true	<a href="#">Edit</a> <a href="#">Settings</a> <a href="#">Info</a> <a href="#">Delete</a>

[Cancel](#)

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# Configurações do Projeto

- Configura de onde a ferramenta vai coletar as métricas



- Home
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## Project

List of Projects save in the tool to collect CI metric information.

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[Cancel](#)

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## Configurações do Projeto

- Main Repository é o repositório onde o código fonte está localizado e roda os pipelines do projeto (ex. Gitlab)
  - Main Repository URL: O endereço do seu repositório
  - Main Repository Token: Token de acesso à API do repositório
  - Issues Erros Labels: lista de labels usados para identificar issues de erro.
  - Production Branch: Nome da branch onde está localizado o código de produção.

Main Repository URL:

`https://projetos.imd.ufrn.br`

Main Repository Token:

`glpat-`

Issues Erros Labels:

`hotfix,INCIDENTE`

Production Branch:

`main`



## Configurações do Projeto

- Secondary Repository: repositório auxiliar para ferramenta que coleta métricas do projeto (ex. SonarQube)
  - Secondary Repository URL: O endereço do seu repositório
  - Secondary Organization: o grupo do projeto dentro do repositório. ex.: br.ufrn.imd/baseimd
  - Secondary Repository Token: Token de acesso à API do repositório

Secondary Repository URL:

https://monitoramento.imd.ufrn.br/sonar

Secondary Repository Organization:

br.ufrn.imd

Secondary Repository Token:

232

Save

Cancel

# Scheduler

- Define as métricas a serem coletadas bem como a frequência dessa coleta


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## Project

List of Projects save in the tool to collect CI metric information.

[+ New Project](#)

List of Projects

Name	Organization	Active	Actions
baseimd	desenvolvimento	true	

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# Scheduler

- Configura a data de início do monitoramento e as métricas que serão monitoradas

Select Frequency of Execution

☒ WEEK ☐ MONTH ☐ YEAR

Set the frequency where measures will be collected

Start Execution at:

01/10/2023



Select a collector

Set a Collector

## Collectors

1	[GITLAB] [CI] Commit per Day (Commit Activity Per Day at Gitlab)	⊖
2	[GITLAB] [CI] Build Activity (Build Activity at Gitlab)	⊖
3	[GITLAB] [CI] Build Duration (Build Duration at Gitlab)	⊖
4	[GITLAB] [CI] Build Health (Build Health at Gitlab)	⊖
5	[GITLAB] [CI] Comments Per Change (Comments Per Issues at Gitlab)	⊖
6	[GITLAB] [CI] Time to Fix a Broken Build (Time to Fix Broken Build at Gitlab)	⊖

Enable automatic collection? (not implemented yet)




Set the status of automatic metric collection

Save

Cancel

# Valores de Referência

- Valores de referência para as métricas a serem coletadas.
- Valores ideais que o time gostaria de alcançar ( *Definidos no geral para todos os projetos*)
- Serve para mostrar **alertas** ao usuários



- Home
- Metric
- Projects
- Metrics Reference Values**
- Project Metrics Values
- Collect Metrics
- Monitoring Dashboard

## holter-devops

### Reference Values

[+ New Reference Value](#)

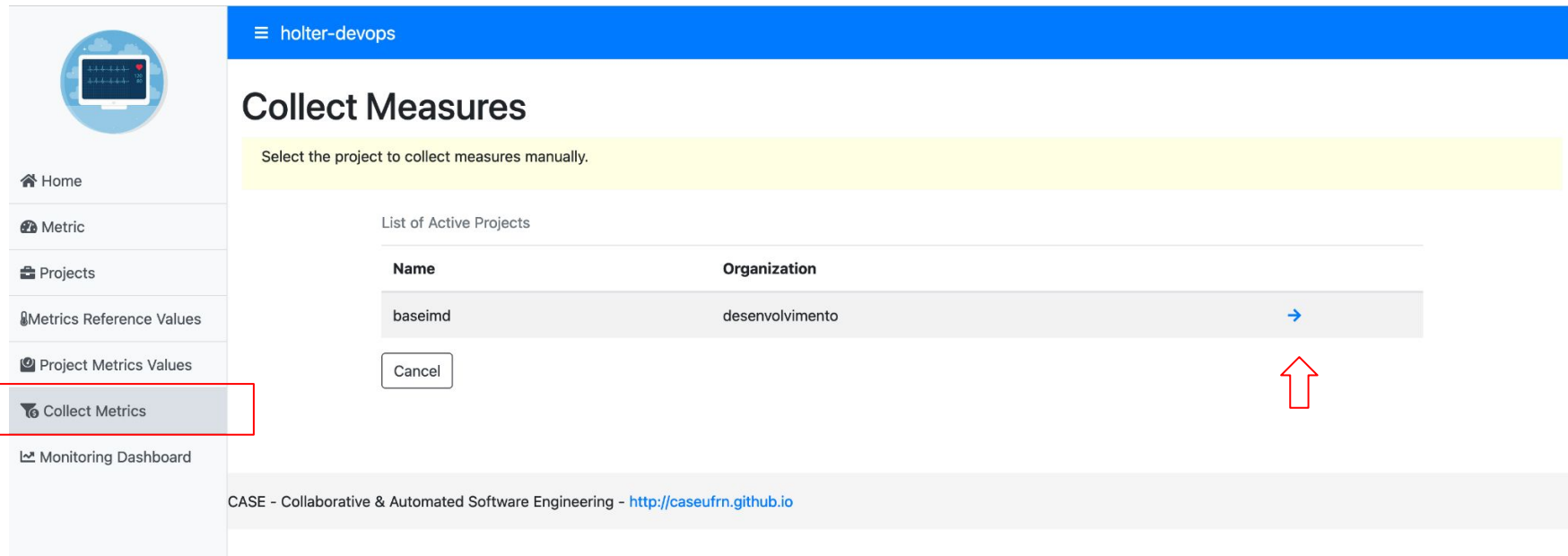
List of Reference Values Defined by the Team

Metric	Reference Value	Actions
Coverage	63 (%)	<a href="#">✎</a> <a href="#">🗑</a>
Commit per Day	2.36 ( )	<a href="#">✎</a> <a href="#">🗑</a>
Time to Fix a Broken Build	96 (hours)	<a href="#">✎</a> <a href="#">🗑</a>
Build Duration	10 (minutes)	<a href="#">✎</a> <a href="#">🗑</a>
Build Health	0.7 (0..1)	<a href="#">✎</a> <a href="#">🗑</a>
Comments Per Change	2 ( )	<a href="#">✎</a> <a href="#">🗑</a>
Build Activity	0.5 (0..1)	<a href="#">✎</a> <a href="#">🗑</a>

[Cancel](#)

# Coletar as métricas

- Coleta manual



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## Collect Measures

Select the project to collect measures manually.

List of Active Projects

Name	Organization
baseimd	desenvolvimento →

Cancel

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# Coletar as métricas

- Mostrará quando cada métrica foi coletada e se o próximo ciclo de coleta está completo (semanal, mensal, anual...)

**Scheduler**  
Execution for the Project **desenvolvimento / gestao-parque-vue**

**Frequency:**  
WEEK

**Start Execution at:**  
2023-10-01

**Last Execution at:**  
2023-10-22 *(Next Collection Cycle is not completed yet)*

**Automatic:**  
false

**Collector 1:** [GITLAB] [CI] Commit per Day (Commit Activity Per Day at Gitlab)  
*(Collector Already Executed from: 2023-10-01T00:00 to: 2023-10-22T23:59:59)*

**Collector 2:** [GITLAB] [CI] Build Activity (Build Activity at Gitlab)  
*(Collector Already Executed from: 2023-10-01T00:00 to: 2023-10-22T23:59:59)*

**Collector 3:** [GITLAB] [CI] Build Duration (Build Duration at Gitlab)  
*(Collector Already Executed from: 2023-10-01T00:00 to: 2023-10-22T23:59:59)*


**Next collection Cycle:**  
**From :**2023-10-23

Mine

Cancel

# Coletar as métricas

- Coleta Automática



- Home
- Metric
- Projects
- Metrics Reference Values
- Collect Metrics
- Monitoring Dashboard

## holter-devops

### Scheduler

Configure the Scheduler Data for **desenvolvimento / gestao-parque-vue**

Select Frequency of Execution

☒ WEEK ☐ MONTH ☐ YEAR

Set the frequency where mesures will be collected

Start Execution at:

01/10/2023

Select a collector

Set a Collector


Enable automatic collection?

☒

Set the status of automatic metric collection

# Dashboard

Filtro do período monitorado



- Home
- Metric
- Projects
- Metrics Reference Values
- Collect Metrics
- Monitoring Dashboard**

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## DevOps Monitoring Dashboard

Project: **desenvolvimento / gestao-parque-vue**

DevOps Maturity

CI Metrics: 4 / 7

DORA Metrics: 0 / 4

Peformance Metrics: 0 / 6

4 / 7


Highlight Metrics: ☒ Stage ☐ Category

Continuous Integration

Continuous Delivery

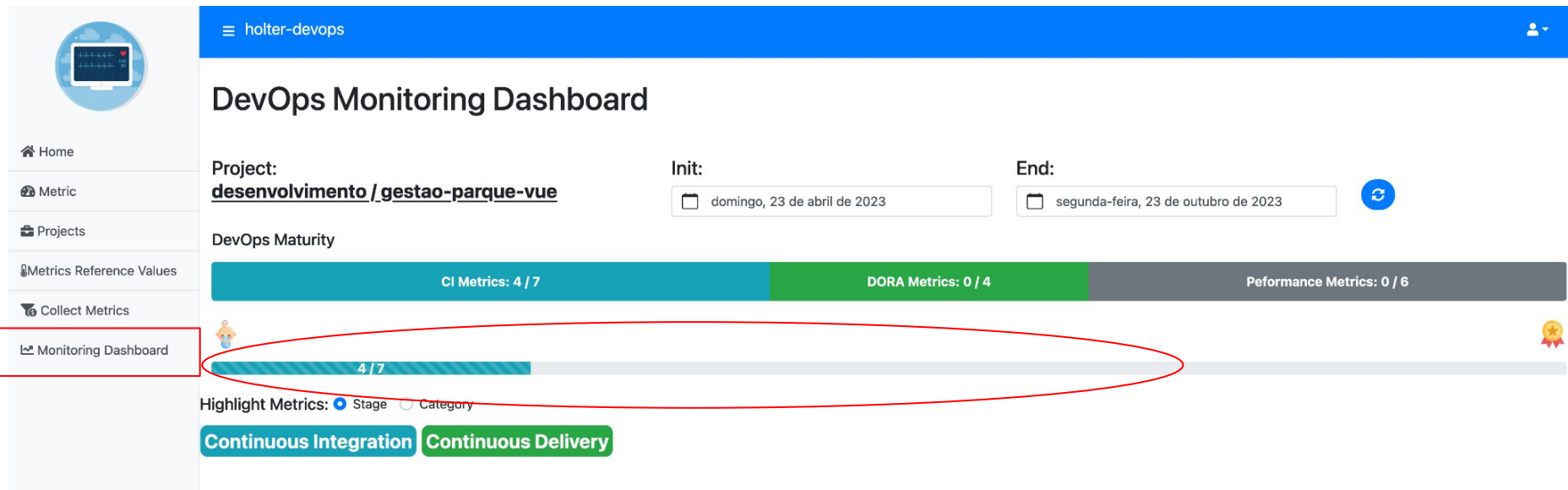
Init:

End:





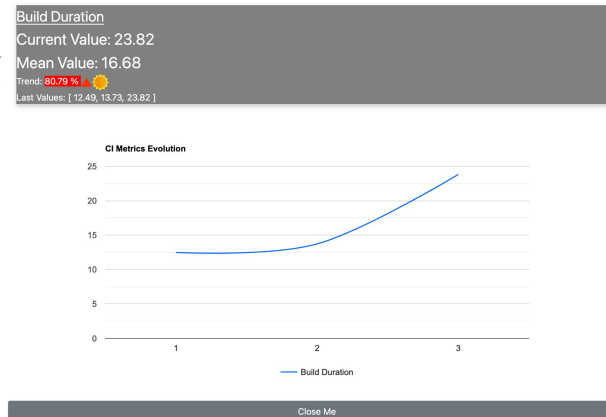
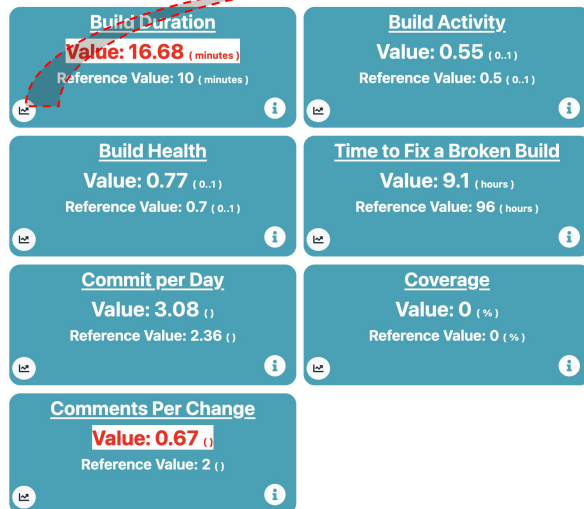
# DashBoard



Barra que mostra o nível de maturidade de seu projeto

# DashBoard

- Valores gerais (médias) das métricas de CI coletadas para o projeto



Ao clicar no botão, mostrará o seu valor atual, sua média, seus último 5 valores, o quanto ela variou e um gráfico com a sua evolução ao longo do tempo.

## DashBoard

- Preciso que vocês acessem pelo menos 1 vez por semana para que a gente possa discutir a evolução das métricas nas entrevistas



## Tecnologias

- A ferramenta foi desenvolvida com Vue.js no frontend, Kotlin + Spring Boot no backend e o banco de dados embarcado H2



# Obrigado



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<http://caseufrn.github.io/>

