

CITLESS

TAES - PROJETO FINAL

Gitless Overview

- The redefinition of “tracked” and “untracked,” and the elimination of “assume unchanged” and the “staging area.”
 - The redefinition of the concept of “branch,” and the elimination of “stash.”
 - The creation of the notion of a “current branch,” and the redefinition of “head.”
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- Change 1 prevents misfits “file tracking” and “untracking file;” change 2 prevents misfit “switching branches;” and change 3 prevents misfit “detached head.” The remaining misfits are not addressed by Gitless.

User Study

- Objetivo: observar o impacto na usabilidade das transformações conceituais feitas
- Participantes recrutados através de formulários enviados ao Grad-I
- Participantes nunca tinham utilizado o Gitless
- Foram divididos, aleatoriamente, em 2 grupos
- Podiam consultar a internet durante o experimento
- Puderam fazer uma overview do Gitless (3 minutos) antes do experimento
- Participantes não precisavam saber programar
- Taxa de sucesso de uma task e seu tempo de execução foram medidos
- Participantes responderam formulários ao final de cada sessão e ao final do estudo

User Study

- 5 participantes
- 2 usuários regulares, 2 novatos e 1 expert
- 3 eram homens e 2 eram mulheres
- Média de idade: 22,6 anos
- Todos são alunos da graduação
- 2 usuários usam o git várias vezes por mês, 2 usuários usam o git várias vezes por semana e 1 usuário usa o git várias vezes por dia
- Todos se sentem confortáveis com o Unix Shell
- Em geral, utilizam o Git para controle de versão de projetos pessoais ou do estágio

Tasks vs Misfits

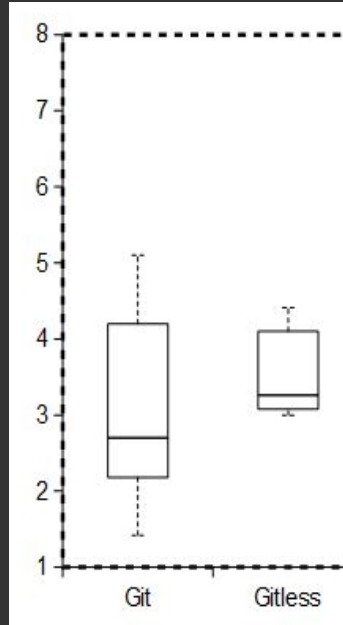
Task	Description	Misfit
1. Add readme file	Create a new file (readme), track it, make another modification to it, and create a commit that includes all changes made to the file	File tracking
2. Let users input weight in kilos	Create a new branch feat/kilos , switch to it, make a change and commit. We then ask them to make another change that is left uncommitted	No related misfit (see §8.2.1)
3. Let users input height in meters	Create a new branch feat/meters , switch to it and make a change. The participant then needs to switch to master to fix a bug	Switching branches
4. Wrap with features	Go back to working on the kilos feature, which involves switching to feat/kilos branch and bringing back uncommitted changes	Switching branches
5. Fixing conflicts	Switch to another branch in the middle of conflicts	Switching branches
6. Code cleanup	Undo an unpushed commit (as if it never existed before)	Detached Head

Resultados - Task Success Rate

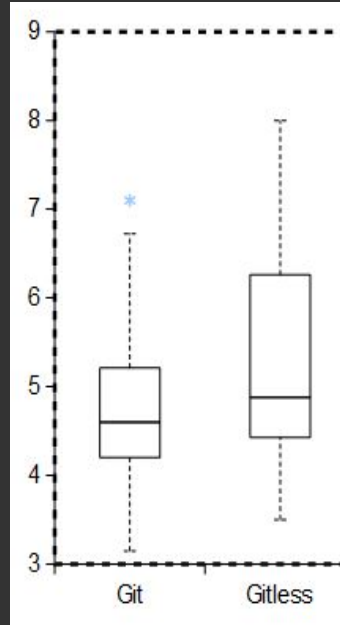
Task	Git	Gitless	Diferença
1. Added readme	100%	100%	-
2. Let users input weight in kilos	100%	80%	-20%
3. Let users input height in meters	60%	80%	20%
4. Wrap with features	40%	60%	20%
5. Fixing conflicts	60%	80%	20%
6. Code cleanup	60%	80%	20%

	Experimento Cln			Experimento Artigo		
Task	Git	Gitless	Diferença	Git	Gitless	Diferença
1. Added readme	100%	100%	-	81.82%	100%	18.18%
2. Let users input weight in kilos	100%	80%	-20%	90.91%	63.64%	-27.27%
3. Let users input height in meters	60%	80%	20%	72.73%	81.82%	9.09%
4. Wrap with features	40%	60%	20%	54.55%	63.64%	9.09%
5. Fixing conflicts	40%	80%	40%	54.55%	90.01%	36.36%
6. Code cleanup	60%	80%	20%	63.63%	81.82%	18.90%

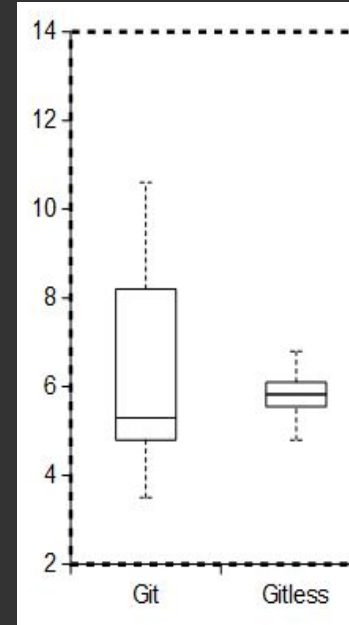
Resultados - Task Completion Times



TASK 1

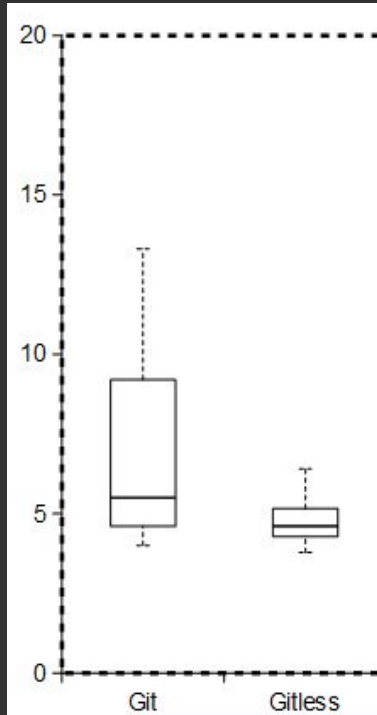


TASK 2

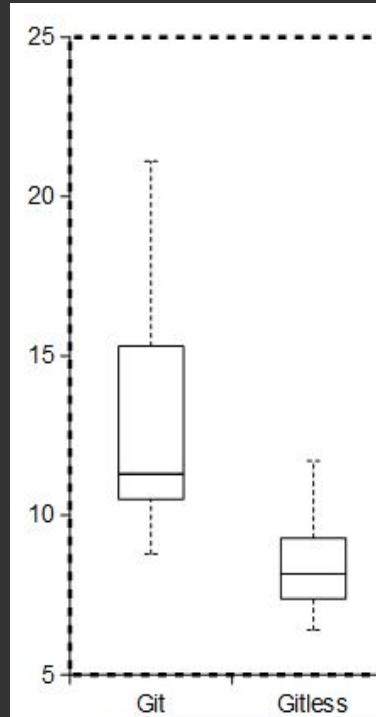


TASK 3

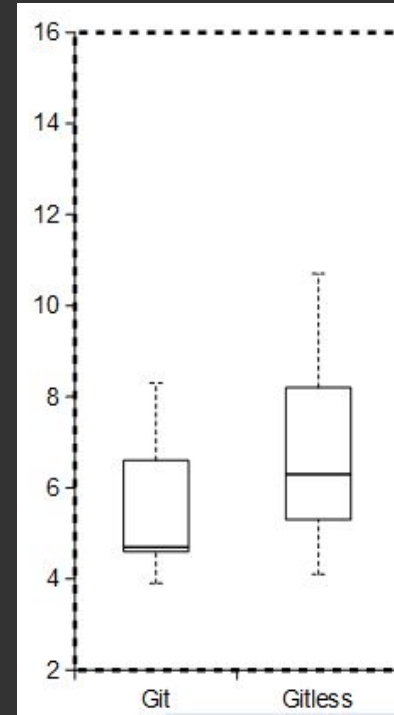
Resultados - Task Completion Times



TASK 4



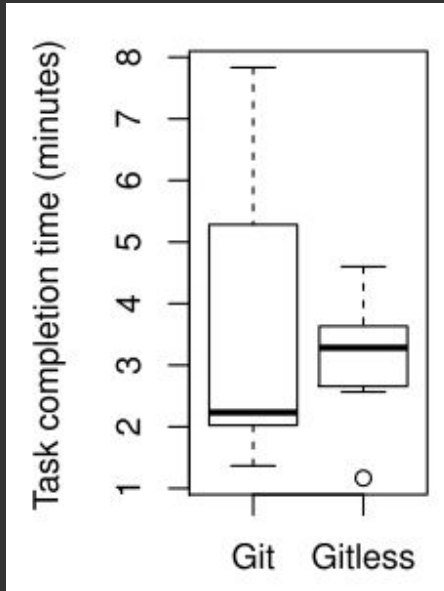
TASK 5



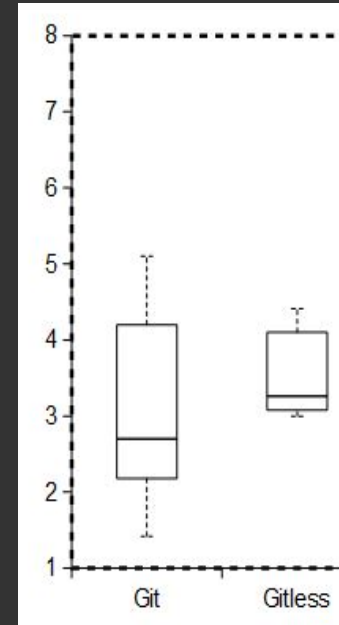
TASK 6

Resultados - Task Completion Times - Comparativo

Task 1



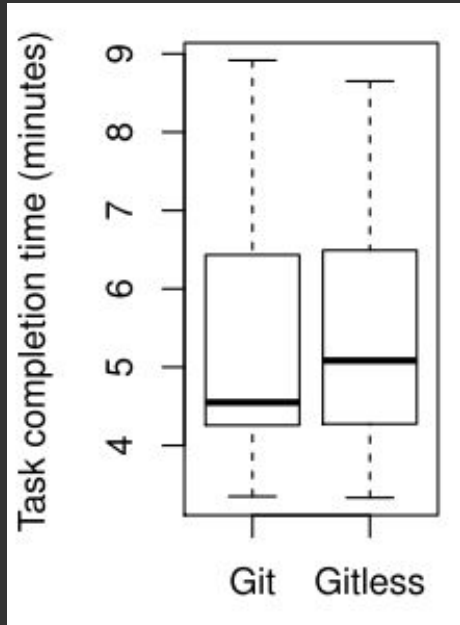
Experimento
Artigo



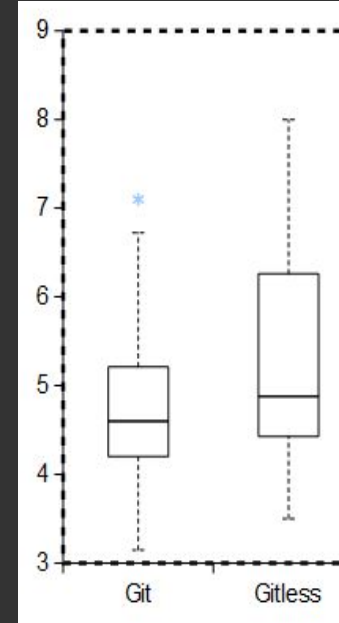
Experimento CIN

Resultados - Task Completion Times - Comparativo

Task 2



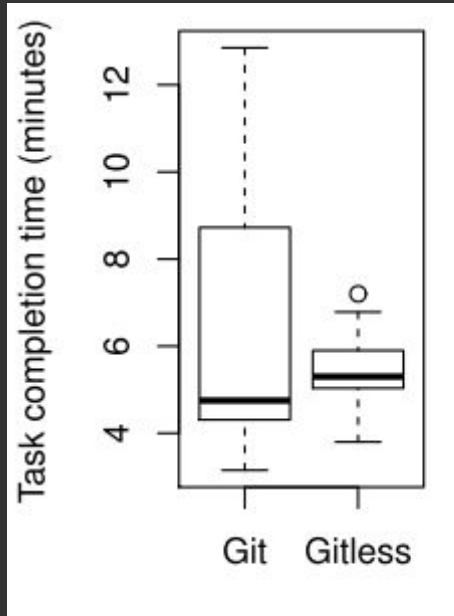
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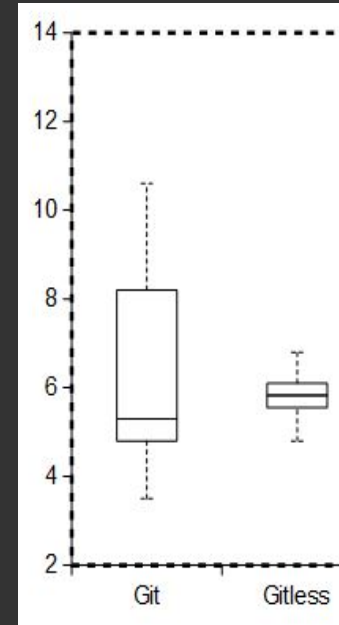
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Resultados - Task Completion Times - Comparativo

Task 3



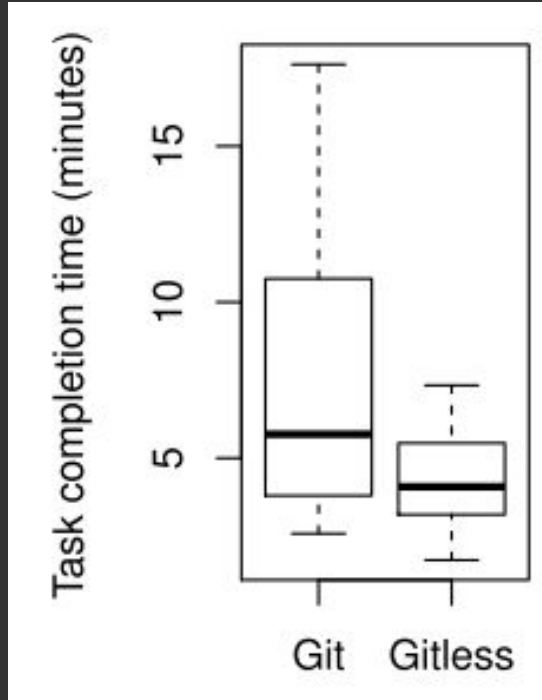
Experimento
Artigo



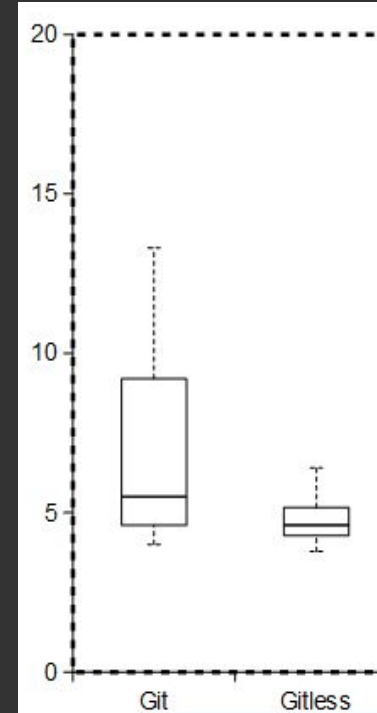
Experimento CIN

Resultados - Task Completion Times - Comparativo

Task 4



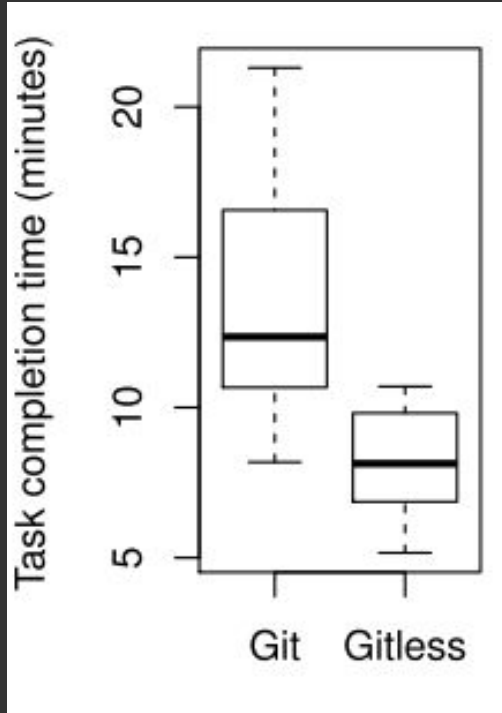
Experimento
Artigo



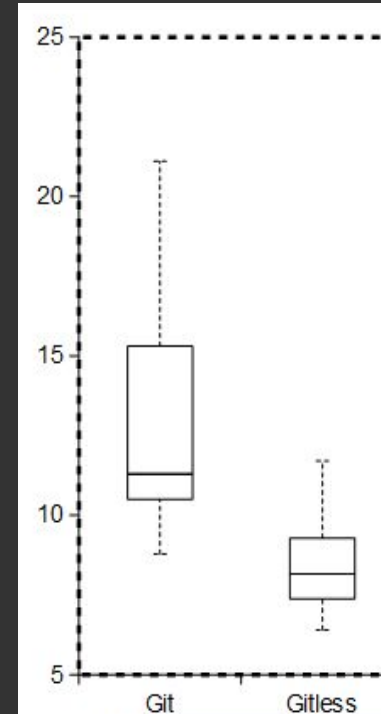
Experimento CIN

Resultados - Task Completion Times - Comparativo

Task 5



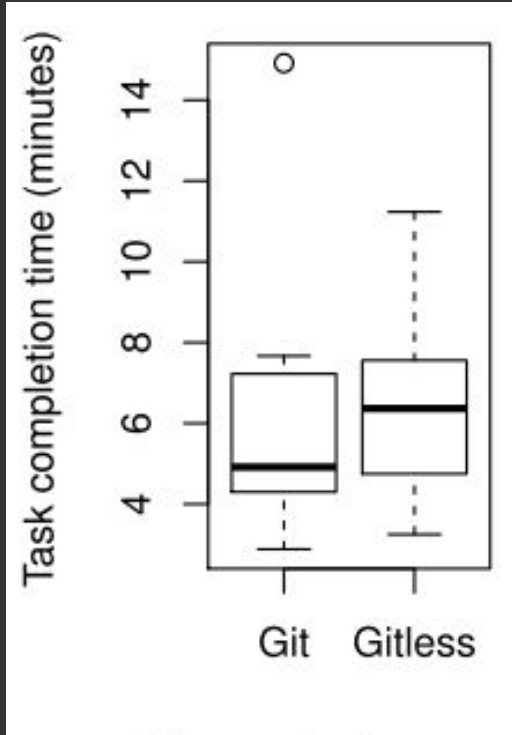
Experimento
Artigo



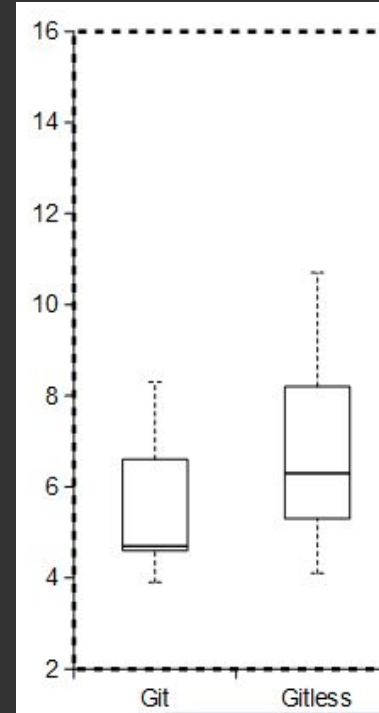
Experimento CIN

Resultados - Task Completion Times - Comparativo

Task 6

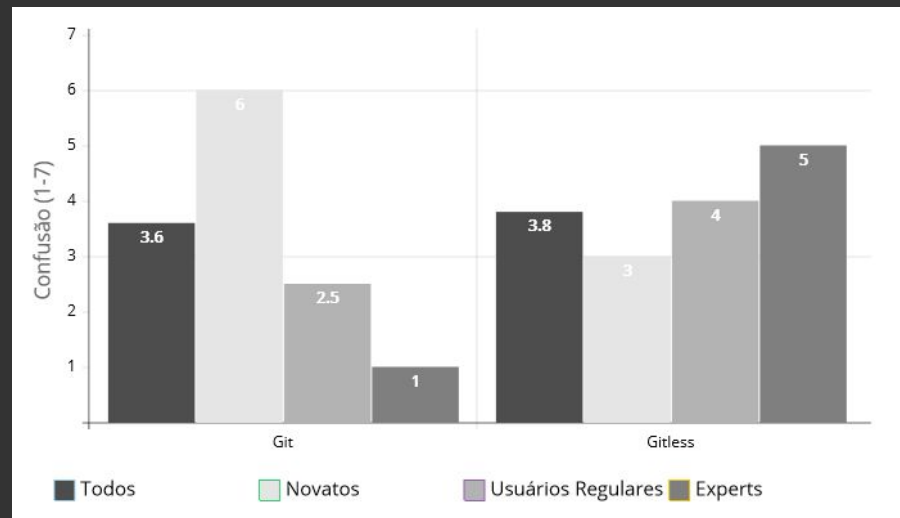
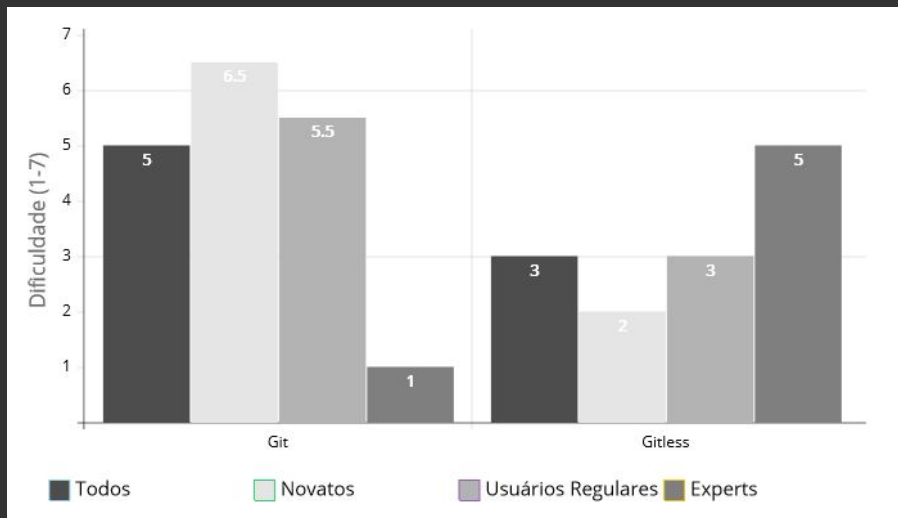


Experimento
Artigo

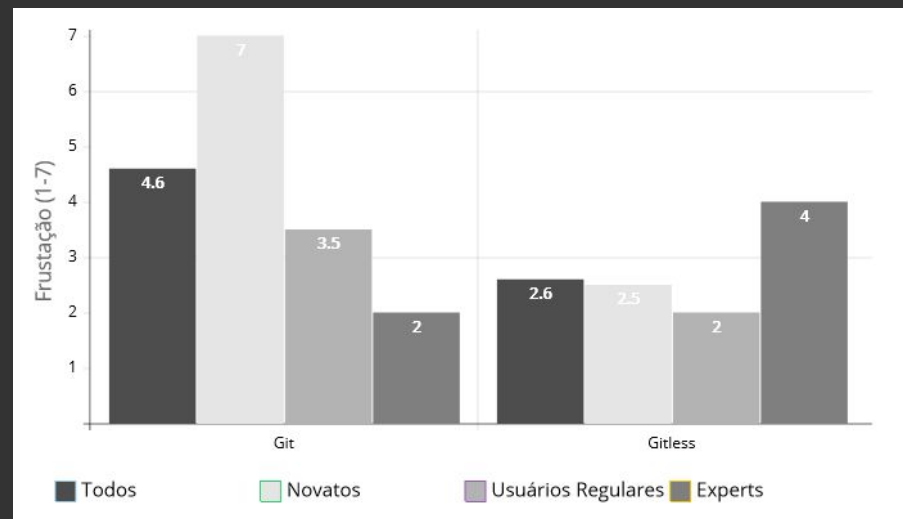
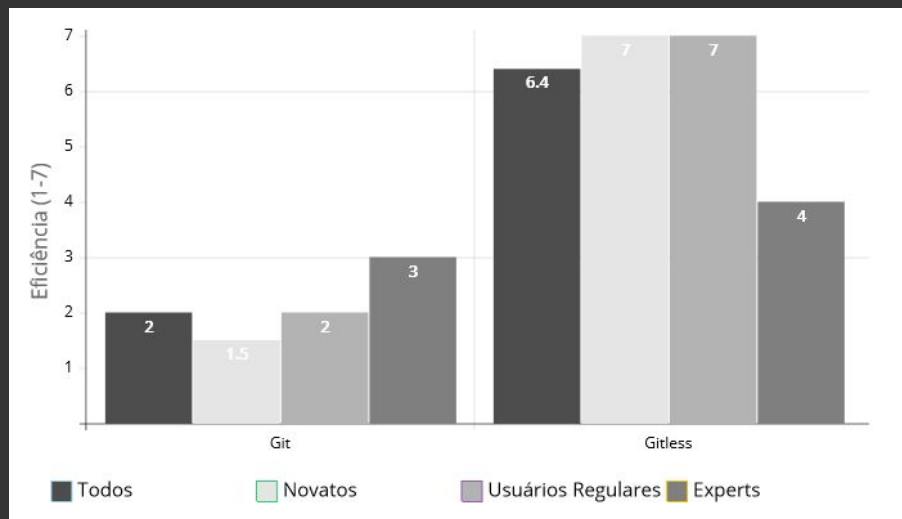


Experimento CIN

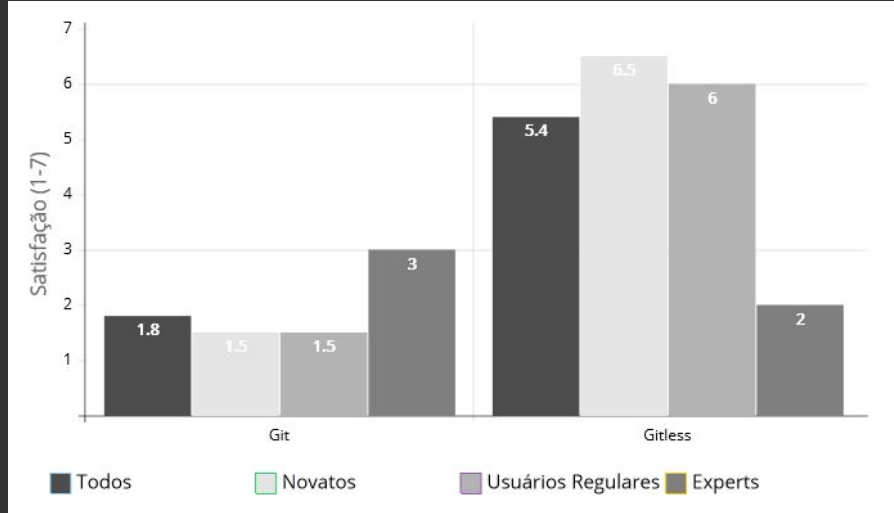
Resultados - Formulários



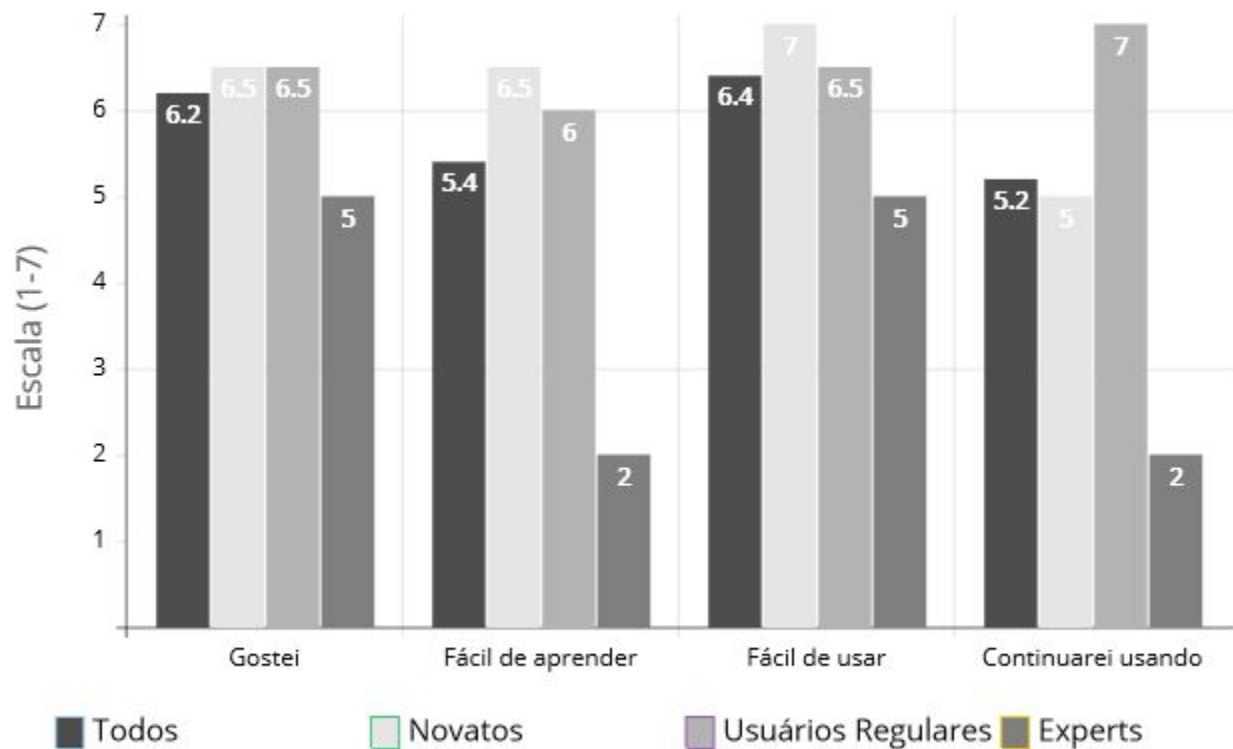
Resultados - Formulários



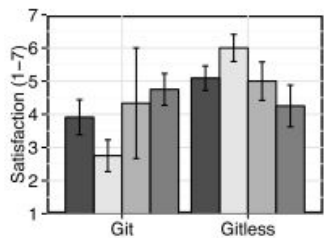
Resultados - Formulários



Resultados - Formulários

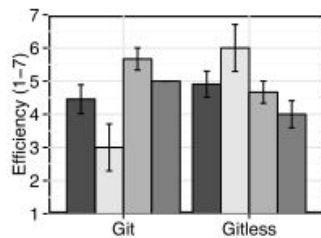


Resultados - Formulários - Experimento Artigo



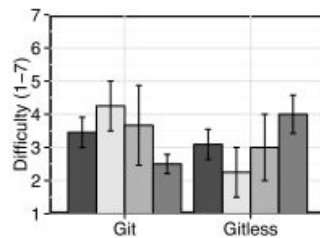
Git Proficiency all novice regular expert

(a) Satisfaction



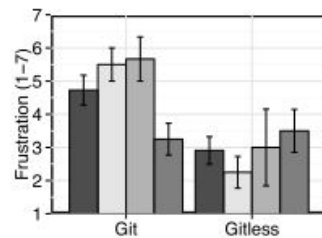
Git Proficiency all novice regular expert

(b) Efficiency



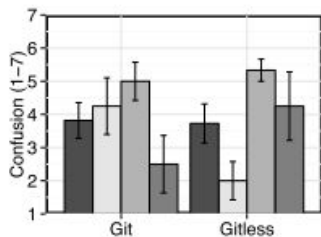
Git Proficiency all novice regular expert

(c) Difficulty



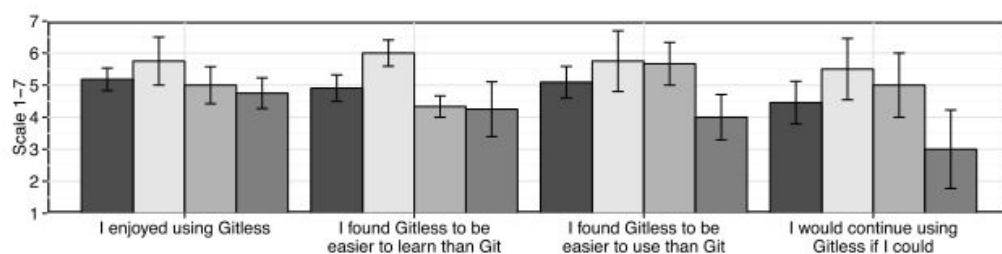
Git Proficiency all novice regular expert

(d) Frustration



Git Proficiency all novice regular expert

(e) Confusion



Git Proficiency all novice regular expert

(f) Git versus Gitless

Resultados - Formulários - Comentários

- Novato: Como ainda não tenho muita experiência, irei aprender através do Gitless
- Novato: Terei que pesquisar mais se é uma ferramenta estável para continuar usando, caso contrário, é melhor aprender a usar o Git mesmo
- Expert: Já tenho experiência com o git, começar a usar o gitless pode me confundir