

Using GitHub in the Classroom



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VERZUZ

is a platform for artists to reconnect with fans by playing their hit songs





GitHub



New to Git and GitHub?

- Start here:

- Jenny Bryan. Happy Git with R.
 - <https://happygitwithr.com/>.
- Jenny Bryan. Excuse me, do you have a moment to talk about version control?
 - <https://www.tandfonline.com/doi/abs/10.1080/00031305.2017.1399928?journalCode=utas20&>

Using GitHub in the Classroom



Have you used Git/GitHub in the classroom previously?

If Yes:

What classroom hassle did GitHub solve?

How did GitHub improve your course?

What classroom hassle did GitHub introduce?

If No:

Assuming you'd like to use GitHub in the classroom, what makes you nervous to about using it?

For any of these, can you think of a song that connects to your thoughts and responses?



**Use `git` and GitHub
in the classroom.**



**You'll be sayin' no, no, no, no, no
When it's really yeah, yeah, yeah,
yeah, yeah**

That Means You!

**Students and
instructors**





**Sending you
forget me nots
To help me to
remember
Baby please forget
me not
I want you to
remember**



GitHub can be
**intimidating to students
and instructors.**

Ringo Starr - It Don't Come Easy



**It don't come easy,
You know it don't come easy.**

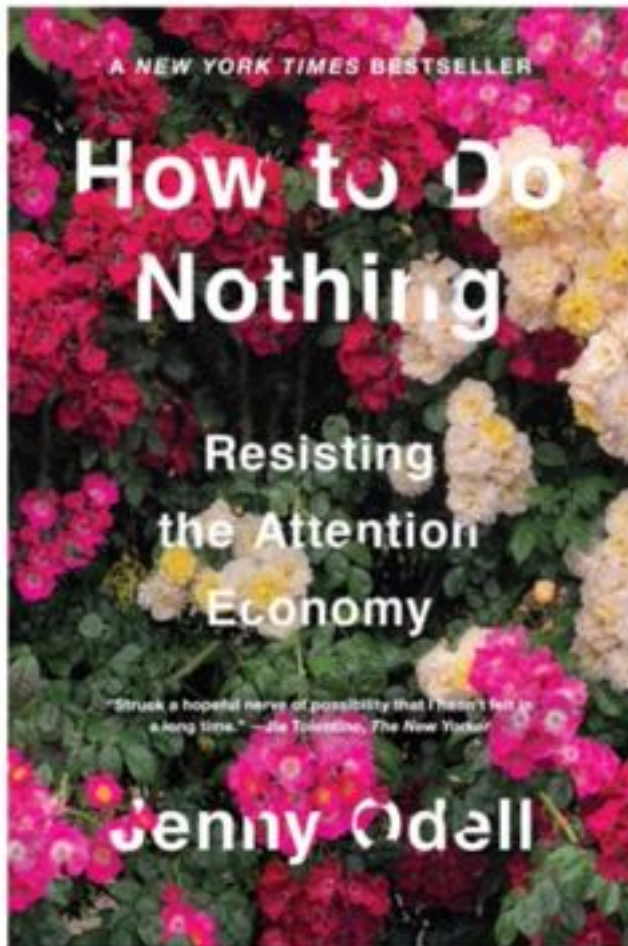
**Two new technologies for
students (and instructors)
to learn and use.**



**I'm so
excited, and
I just can't
hide it
I'm about to
lose control
and I think I
like it**

Pointer Sisters - I'm So Excited

FOMO = Fear of Missing Out
NOMO = *Necessity* of Missing Out



Blackboard



Discord

GitHub



git



campuswire



jupyter



python



Studio



INSTRUCTURE



GitHub can also help
with classroom
management, cutting
down on the breadth of
the "tech stack."



classroom
enterprise

.com

rundel/ghclass

**How am I supposed to
decide which way to
GitHub**



**There's too many men, too many
people
Making too many problems
And not much love to go round
Can't you see this is a land of
confusion?**



Statistics Courses using GitHub

STAT 107 – Intro DS – Python – Enterprise

STAT 207 – Intro DS – Python –Enterprise

STAT 385 – Programming – R – Classroom

STAT 430 – Programming – Python – Enterprise

STAT 447 – Programming – R – .com / Enterprise

STAT 440 – Data Management – R – Enterprise

STAT 448 – Data Analysis – R – Enterprise

Assignment distribution **(to students)**



**Give it away, give
it away, give it
away, now**

[Classrooms](#) / UIUC STAT 385 - Spring 2020
















UIUC STAT 385 - Spring 2020

stat385-sp2020

[Assignments](#) 5 [Students](#) 0 [TAs and Admins](#) 1 [Settings](#)

Assignments

[New assignment](#)

	hw04 Individual assignment	Beta Starter Course Give feedback	Invite link  
	hw05 Individual assignment		Invite link  
	hw06 Individual assignment		Invite link  
	rstudio-test Individual assignment		Invite link  
	test-assignment Individual assignment		Invite link  



stat430-sp21

Part of University of Illinois College...

Course staff

Repositories 103 People 6 Teams Projects Settings

Pinned repositories

Customize pinned repositories

_release

5

Find a repository...

Type: All

Language: All

New

Student 1

Private

Spring 2021 repository for [redacted]

Jupyter Notebook 0 0 0 0 Updated on May 12

_release

Assignment release

5 0 0 0 Updated on May 11

_staging

Private

Assignment draft/solution
(only for course staff)

Jupyter Notebook 0 0 0 0 Updated on May 11

Top languages

Jupyter Notebook HTML

People

6



Add someone

Student 2

Private

Spring 2021 repository for [redacted]

Jupyter Notebook 0 0 0 0 Updated on May 7

Student 3

Private

Spring 2021 repository for [redacted]

Jupyter Notebook 0 0 0 0 Updated on May 6

Assignment submission **(from students)**

Stevie Wonder - Signed, Sealed, Delivered (I'm Yours)



**Ooh baby,
here I am
Signed,
sealed,
delivered,
I'm yours**

hw05

Individual assignment - Deadline Passed

Enable assignment invitation URL `https://classroom.github.com/a/zL`

[Delete](#)[Edit assignment](#)

Assignment submissions

[Download Repositories](#)[Sort assignments by: GitHub login](#)

Student 1
 0 commits Not Submitted [Go to repo](#)

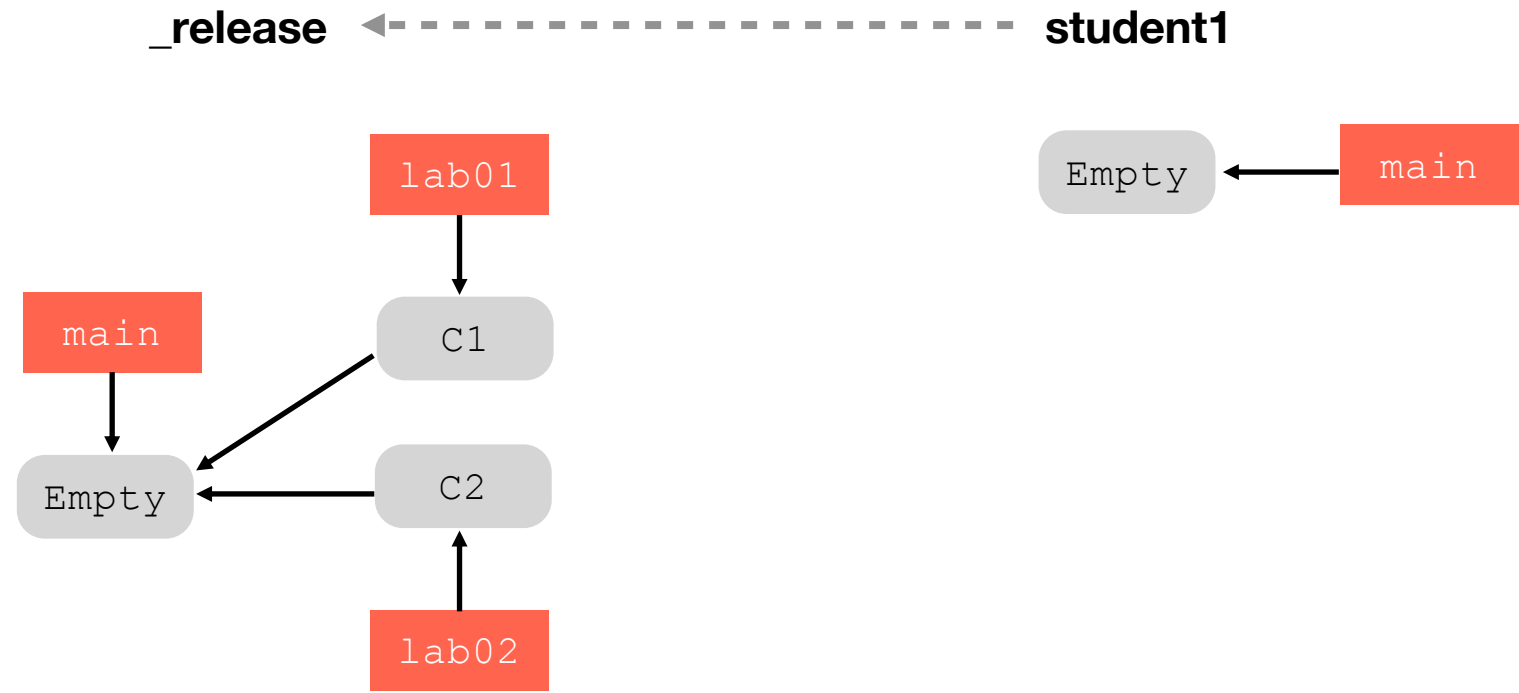
Student 2
 0 commits Not Submitted [Go to repo](#)

Student 3
 1 commit Submitted [Go to repo](#)

Student 4
 3 commits Submitted [Go to repo](#)

Student 5
 0 commits Not Submitted [Go to repo](#)

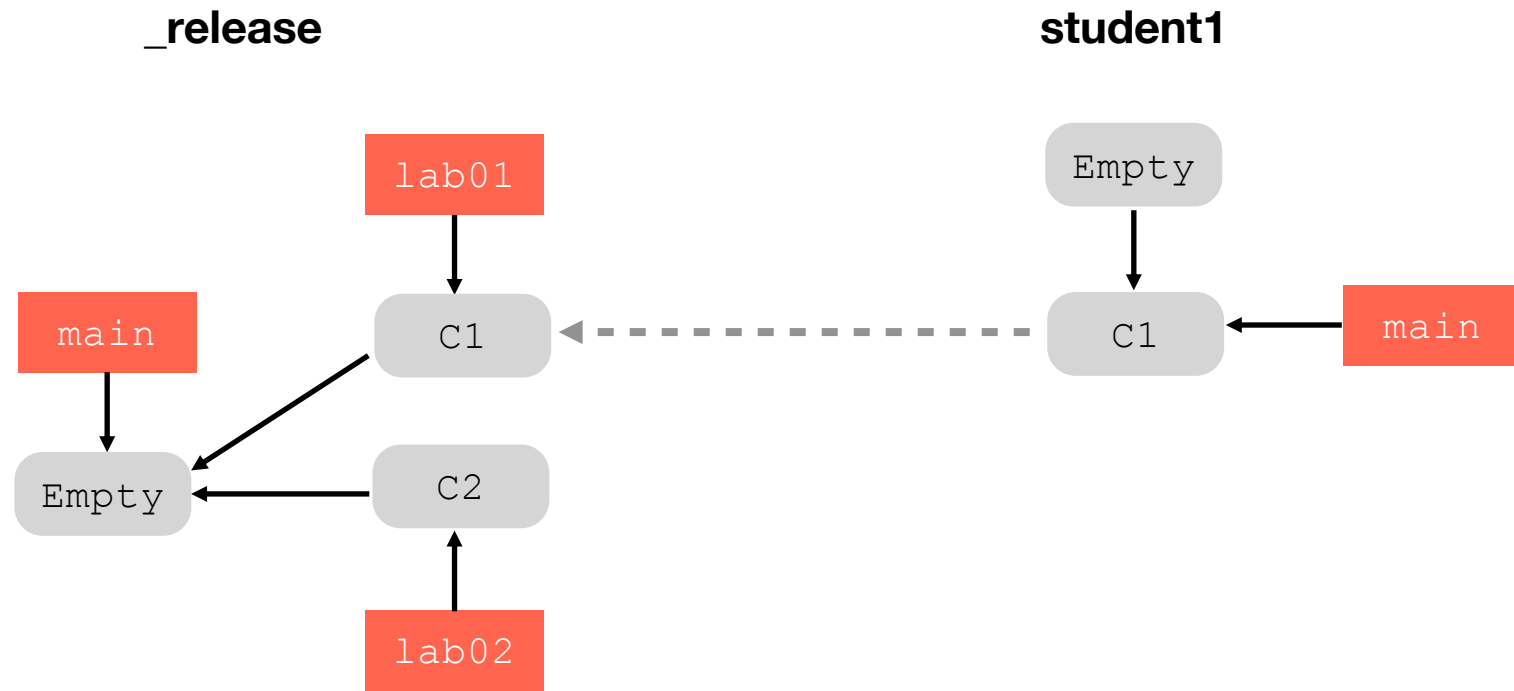
The screenshot shows the GitHub interface for the repository 'stat430-sp21', which is part of the University of Illinois College. The page features a navigation bar with 'Repositories' (103), 'People' (6), 'Teams', 'Projects', and 'Settings'. An arrow points to the 'People' link with the label 'Course staff'. Below the navigation bar, there is a 'Pinned repositories' section with a search bar and a 'New' button. The main content area displays a list of repositories for three students, each with a 'Private' label and a 'Spring 2021 repository for [redacted]' description. The first student's repository list includes: a private repository, a public repository named '_release' (labeled 'Assignment release'), and a private repository named '_staging' (labeled 'Assignment draft/solution (only for course staff)'). The second and third students have similar repository lists. On the right side, there are sections for 'Top languages' (Jupyter Notebook, HTML) and 'People' (6), with an 'Add someone' button.



Student's terminal

```
git remote add _release https://github-dev.cs.illinois.edu/stat430-sp21/_release.git
```





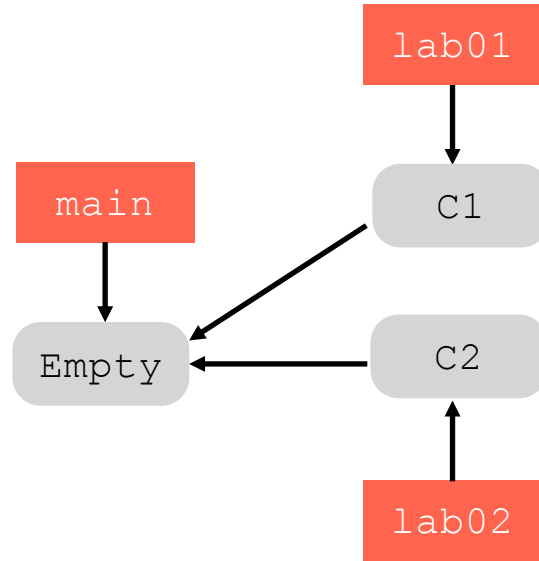
Student's terminal

```
git fetch _release  
git merge _release/lab01 -m "get lab01"
```

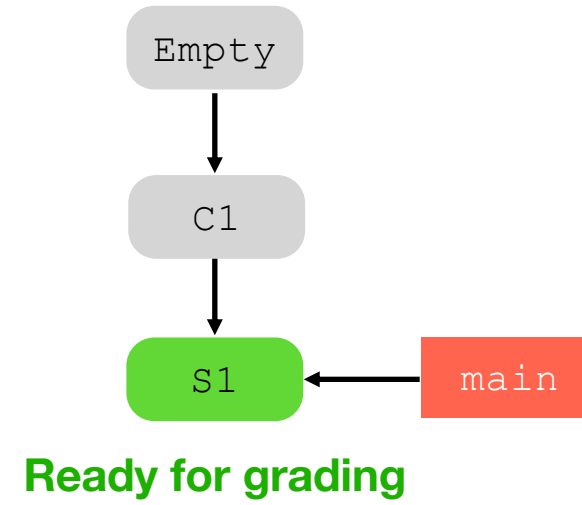
Legend



_release



student1



Student's terminal

```
git add -A
git commit -m "submit lab01"
git push origin main
```

Legend

branch

commit

**So now students need to
know GitHub to obtain and
submit homework about
GitHub?**



**Nothing from
nothing leaves
nothing
You gotta have
something if
you wanna be
with me**



**Students: GitHub is just
an LMS replacement.**

THIS IS GIT. IT TRACKS COLLABORATIVE WORK
ON PROJECTS THROUGH A BEAUTIFUL
DISTRIBUTED GRAPH THEORY TREE MODEL.

COOL. HOW DO WE USE IT?

NO IDEA. JUST MEMORIZE THESE SHELL
COMMANDS AND TYPE THEM TO SYNC UP.
IF YOU GET ERRORS, SAVE YOUR WORK
ELSEWHERE, DELETE THE PROJECT,
AND DOWNLOAD A FRESH COPY.



**Kinson: Haven't we
accomplished our goal?**



GitHub offers comparable digital communication capabilities as any other LMS (Blackboard, Moodle, Piazza, Campuswire, etc.).



**Come and talk to me
I really wanna meet you
Can I talk to you?
I really wanna know you**

Filters

🏷 Labels 9

📅 Milestones 0

New issue

ⓘ 229 Open ✓ 881 Closed Author Label Projects Milestones Assignee Sort

ⓘ Final Project help wanted 2
#1005 opened on Apr 29 by [redacted]

ⓘ Hw06 solutions posted and office hours last day communication
#1004 opened on Apr 29 by kinson2

ⓘ Final project allowed libraries help wanted 1
#1003 opened on Apr 29 by [redacted]

ⓘ QTNA 13 QTNA
#1001 opened on Apr 28 by [redacted]

ⓘ Updates on Final Project communication
#1000 opened on Apr 28 by kinson2

ⓘ QTNA13 QTNA
#999 opened on Apr 28 by [redacted]





GitHub allows instructors
to give detailed feedback on
student assignments.

n°1
en
ANGLETERRE

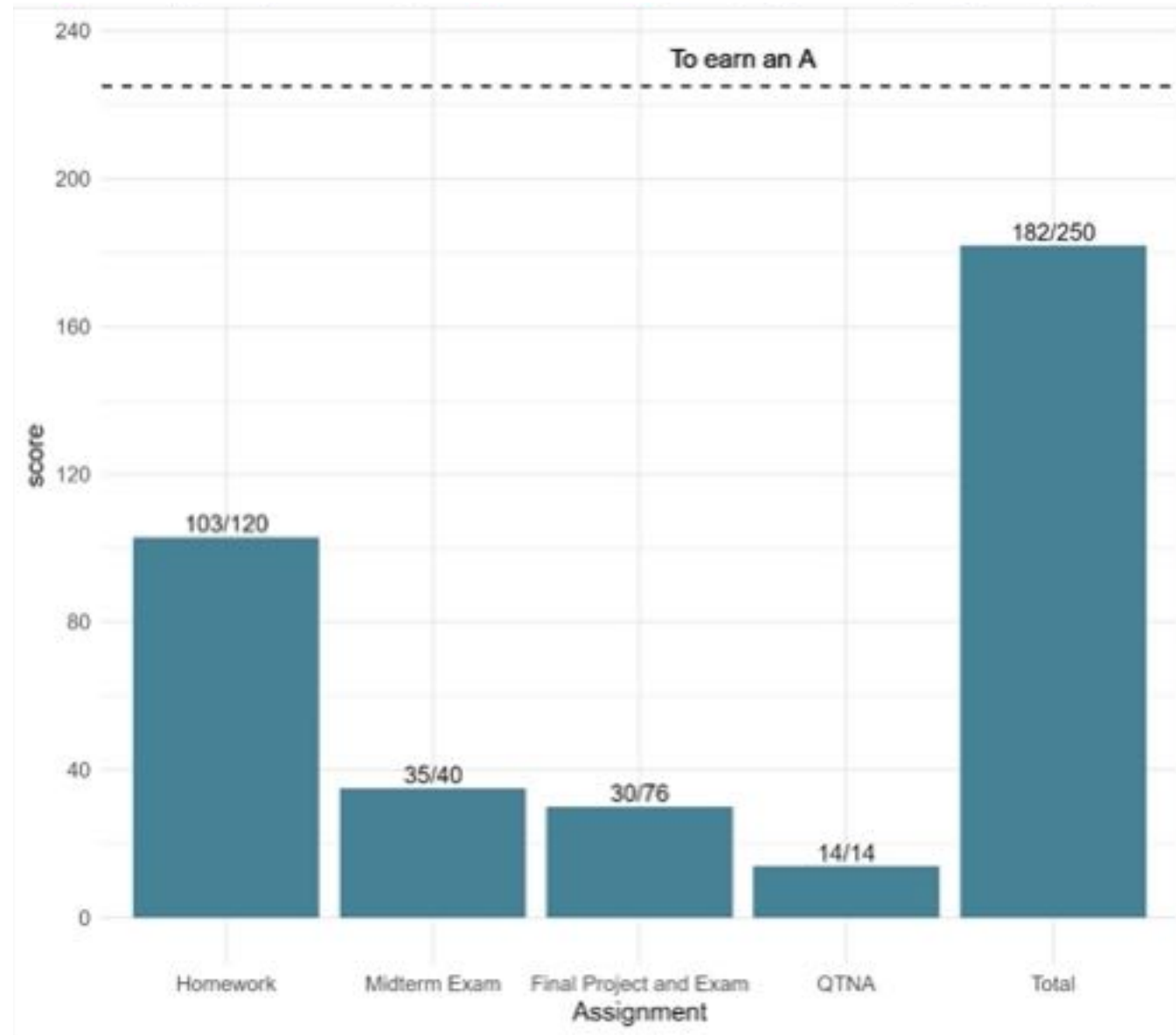
BUGGLES

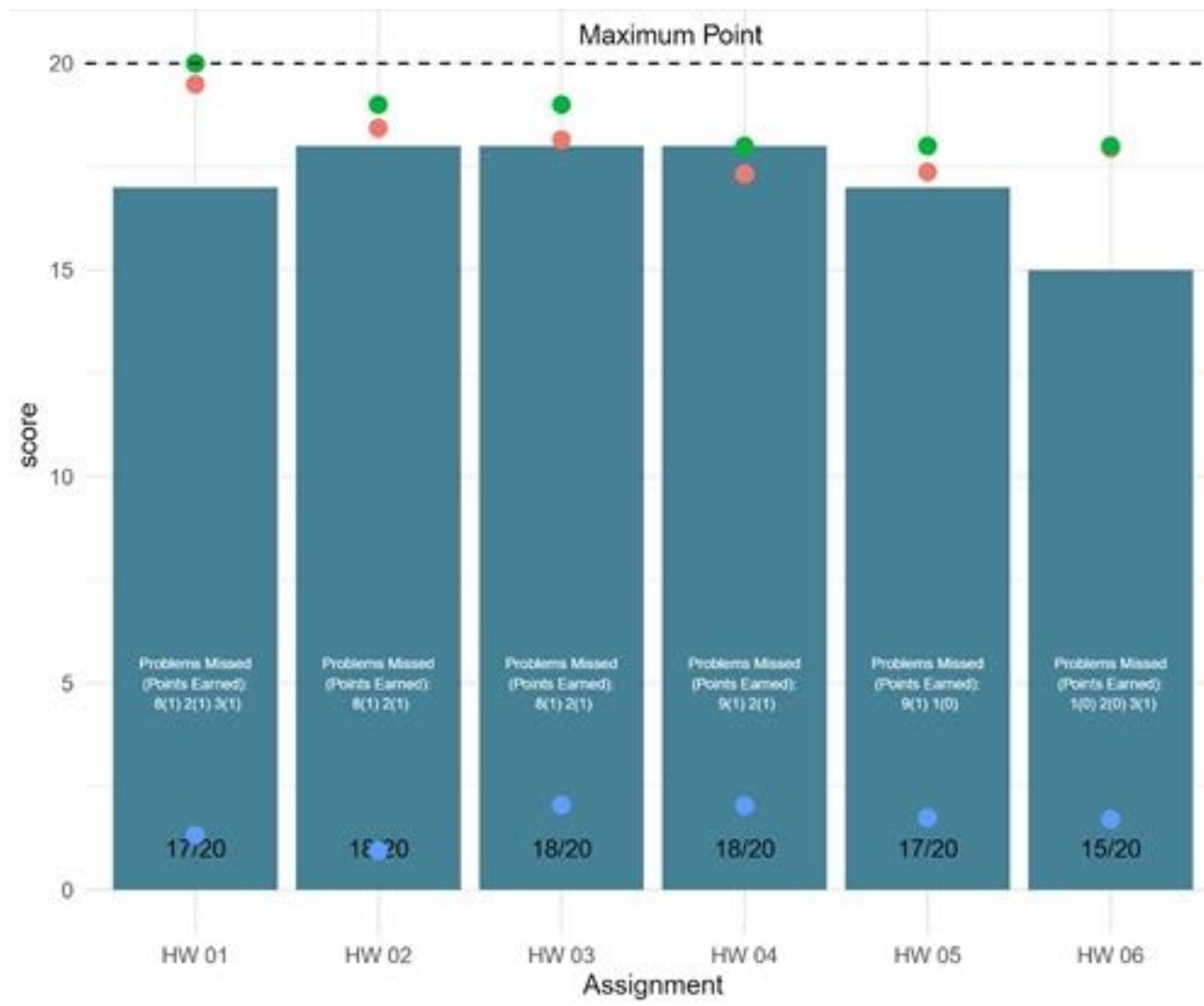
VERSION ORIGINALE

“video killed the radio star”



ISLAND





**Aren't you having to do a
lot of work to create this
kind of feedback?**



**You lied to me
Yes, I tried,
Yes, I tried
You lied to me**

Mark Morrison - Return of the Mack



GitHub is a tool for
collaboration.
Easy to **see and assess**
contributors and
contributions.

**We are family
Get up
everybody
and sing**



**I've made a good case for
using GitHub in the
classroom and my evidence
is quite convincing.**

**Ain't nobody
dope as me
I'm just so
fresh, so clean**



Although you make some interesting points, I want to wait and take my time to learn more about Git and GitHub.

**Take your
time
Do it right**



I'm still nervous:

1. Rosters / Onboarding

2. FERPA

3. Installation

4. What classes should use GitHub?

5. Where should GitHub be introduced in those classes?

Takeaways

1. Teach Git and GitHub
2. Use Git and GitHub for class management.
3. There are always tradeoffs.
4. Do one new thing.
5. Ask for help!
6. Once you're comfortable, help others!
7. Show your mistakes!

References

1. Bryan (2018) [Excuse Me, Do You Have a Moment to Talk About Version Control?](#)
2. Bryan, Hester, and STAT 545 TAs (2018) [Happy Git and GitHub for the useR](#)
3. Odell (2019) How to Do Nothing: Resisting the Attention Economy
4. Rundel and Cetinkaya-Rundel (2021) [ghclass: Tools for Managing Classes on GitHub](#)
5. Wade Fagen-Ulmschneider (2019) [UIUC GitHub Enterprise Workflow](#)
6. Fiksel, Jager, Hardin & Taub (2019) [Using GitHub Classroom To Teach Statistics](#)
7. Beckman, Çetinkaya-Rundel, Horton, Rundel, Sullivan & Tackett (2021) [Implementing Version Control With Git and GitHub as a Learning Objective in Statistics and Data Science Courses](#)

Have you used Git/GitHub in the classroom previously?

If Yes:

What classroom hassle did GitHub solve?

How did GitHub improve your course?

What classroom hassle did GitHub introduce?

If No:

Assuming you'd like to use GitHub in the classroom, what makes you nervous to about using it?

For any of these, can you think of a song that connects to your thoughts and responses?

Is there any other technology you've considered using but are nervous to try? If so, what and why?

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