ITCR Training Network (ITN) Overview

ITCR Annual Meeting 2022

Carrie Wright
- Fred Hutchinson Cancer Center
- Formerly at Johns Hopkins Bloomberg School of Public Health

FRED HUTCH
CURES START HERE®

JOHNS HOPKINS
BLOOMBERG SCHOOL of PUBLIC HEALTH
DATA SCIENCE LAB

ITN

itcrtraining.org

Events

Motivation

We are all busy - especially cancer researchers!

https://media.giphy.com/media/q6RoNkLlFNjaw/giphy.gif

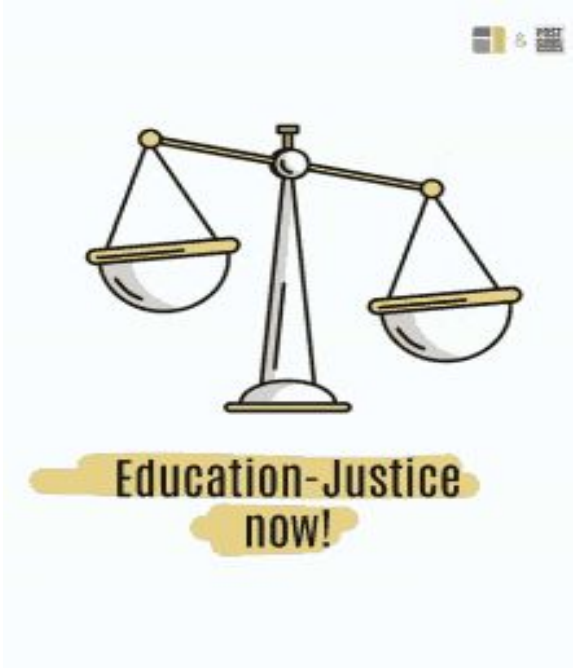
Technology is changing quickly & it's hard to keep up!
ITCR developers keep making more awesome software!

https://media.giphy.com/media/lRnUWhmllPI9a/giphy.gif

Our thought...

Cancer research could advance faster if informatics was more accessible.

Democratizing informatics holds great power to improve diversity in cancer research



https://c.tenor.com/lOM2TVfL0joAAAAM/democracy-mypostcard.gif

Clinical or translational wet bench scientists

… often want to do more informatics work

How can we make it easier to use/find informatics tools?

https://medium.com/@lidwrite94/the-superwoman-burden-7ab0a54e83d9

The busy bioinformatician

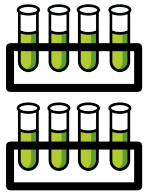
https://medium.com/@lidwrite94/the-superwoman-burden-7ab0a54e83d9

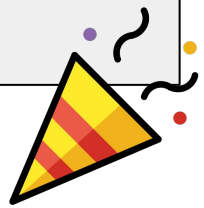
… wants more people to use their tools successfully

… wants to learn how to work with new types of data

How can we help tools reach more people?

I have all these awesome sample data – now to analyze it!





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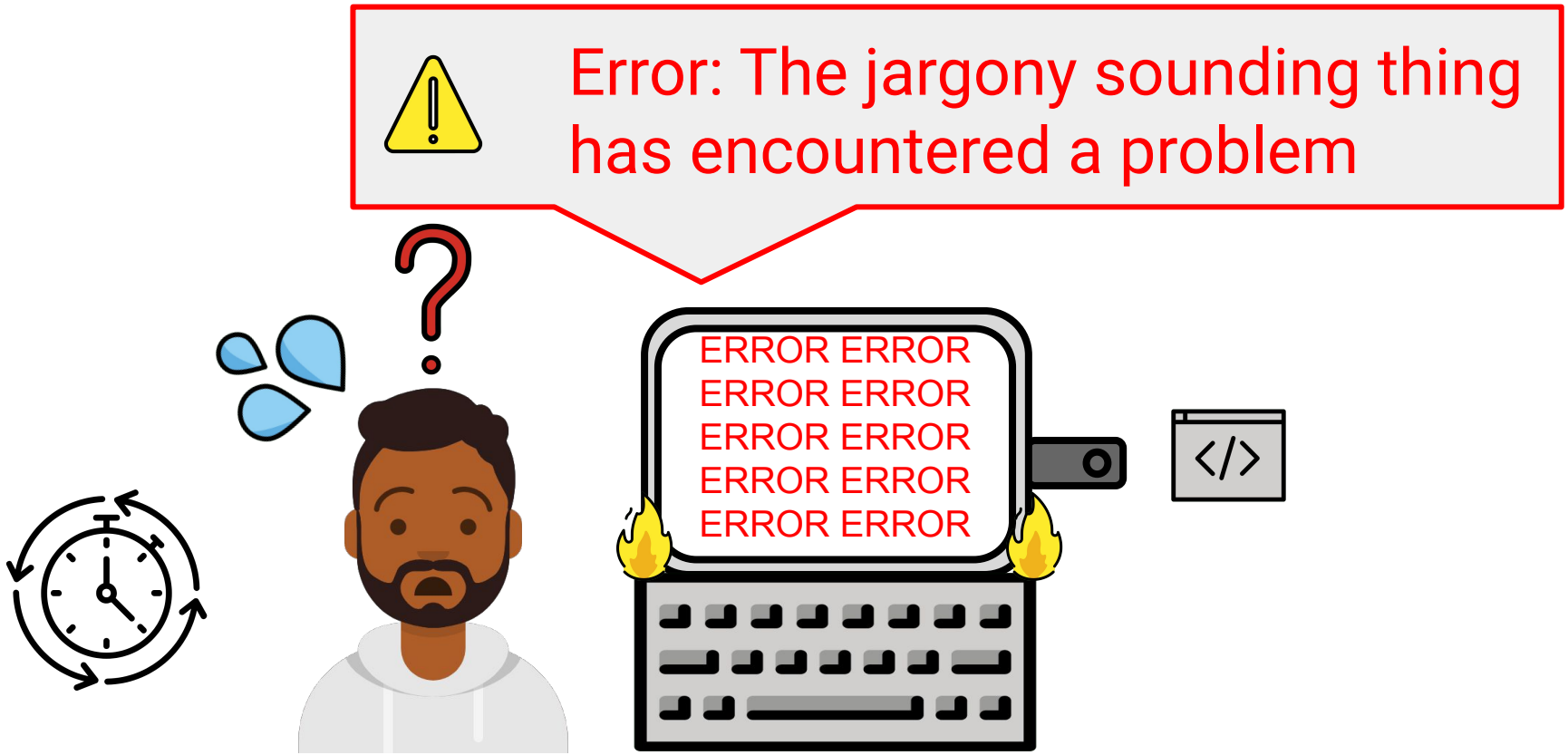

Inefficiency

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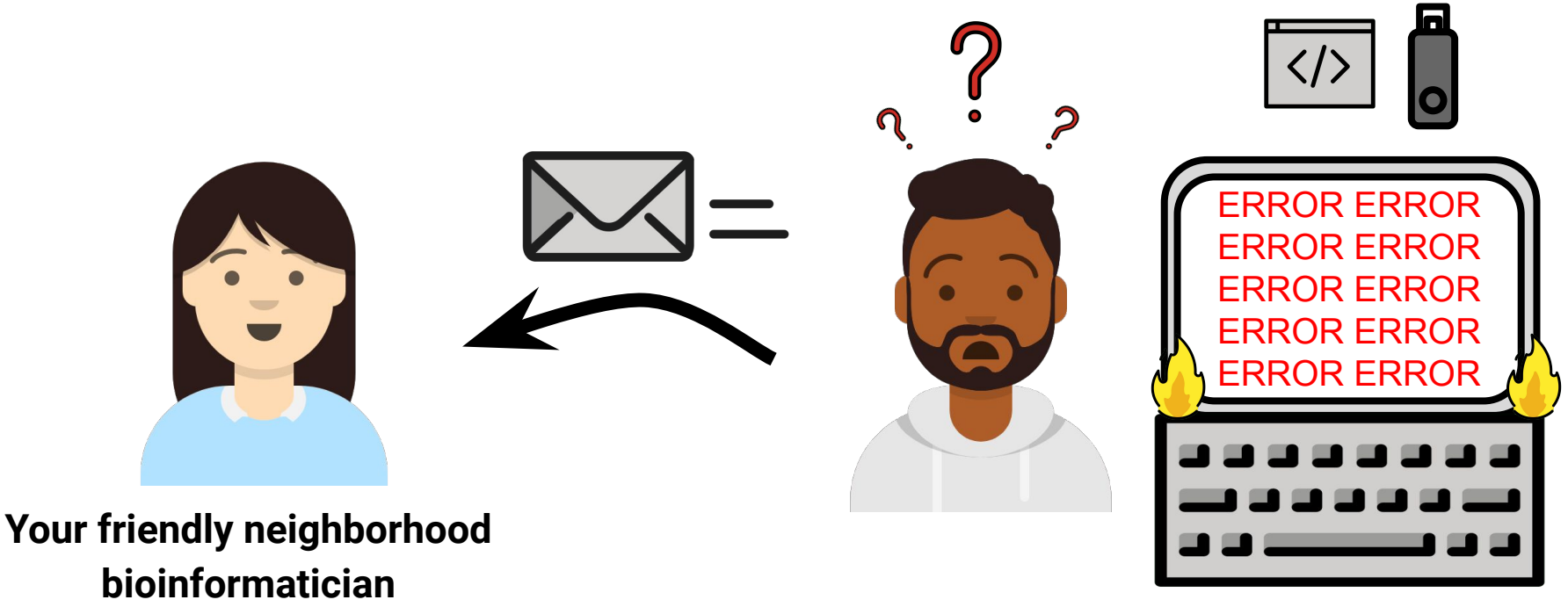

Your friendly neighborhood bioinformatician

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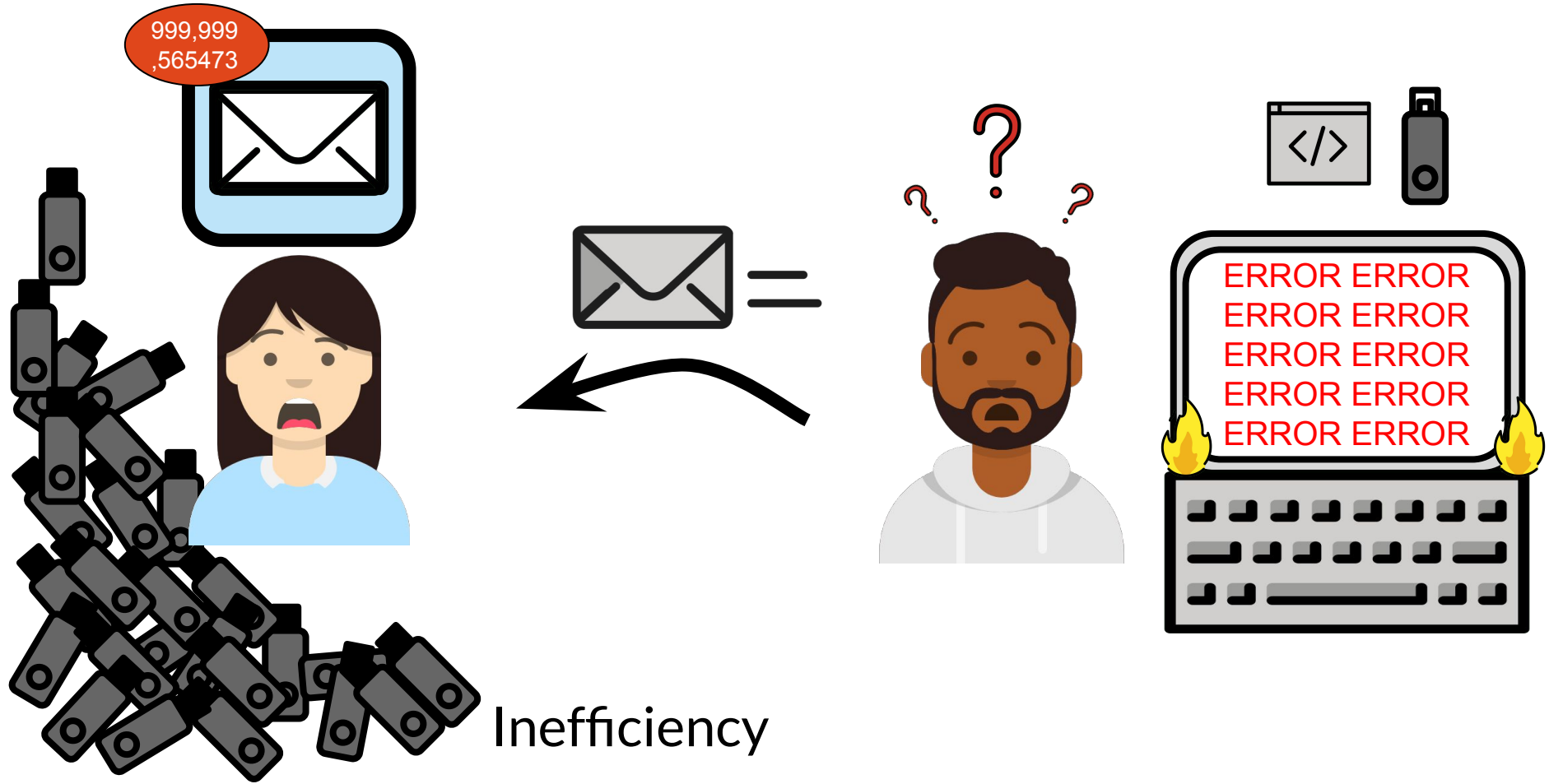

Inefficiency

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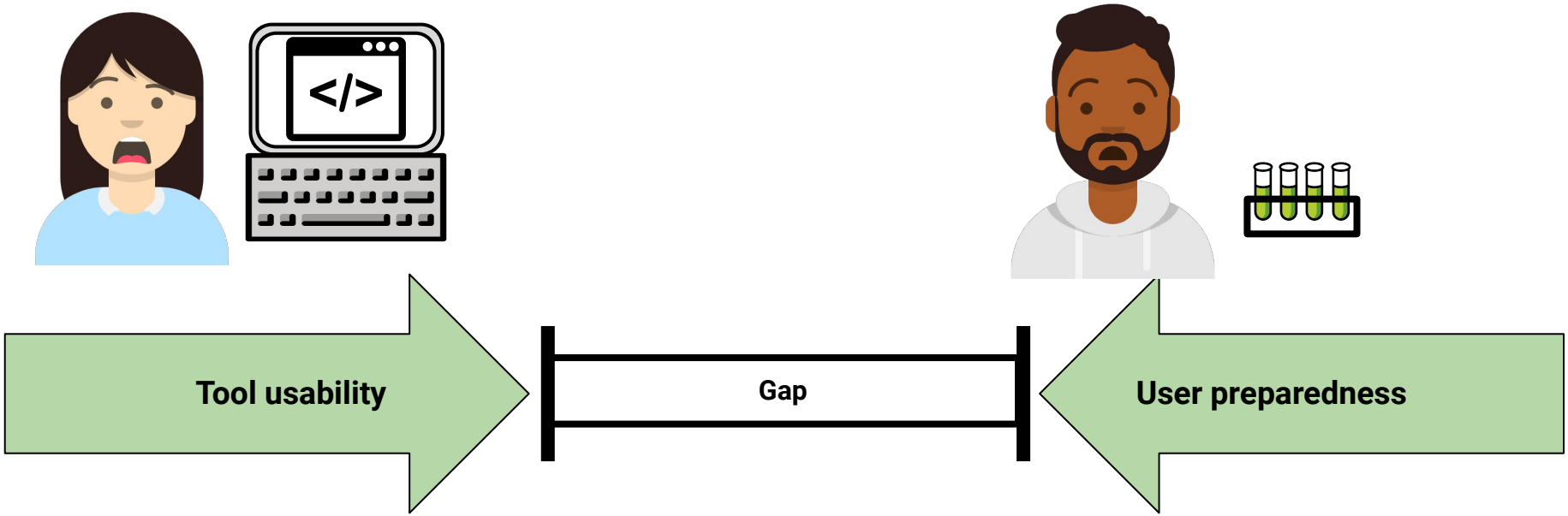
Cancer informatics is hindered by a gap between different types of experts



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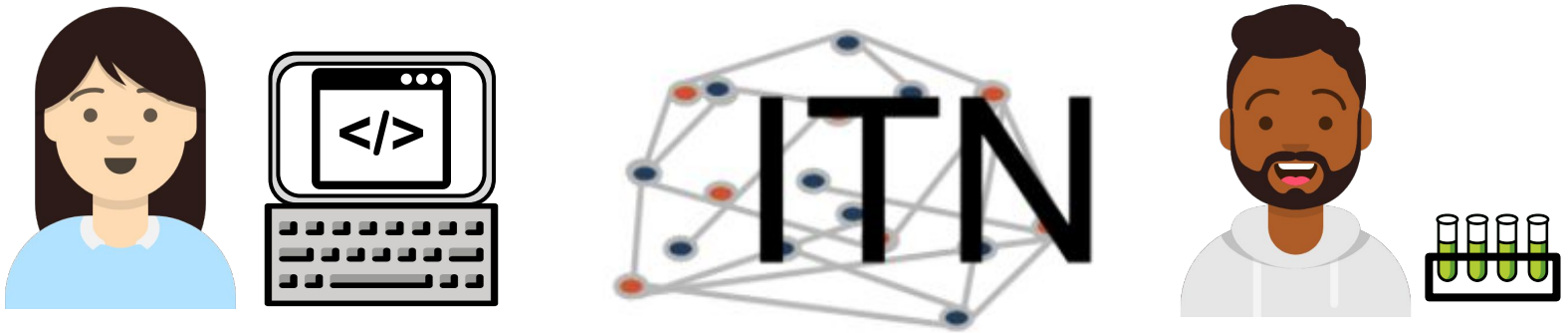
Catalyzing Informatics for Cancer Research



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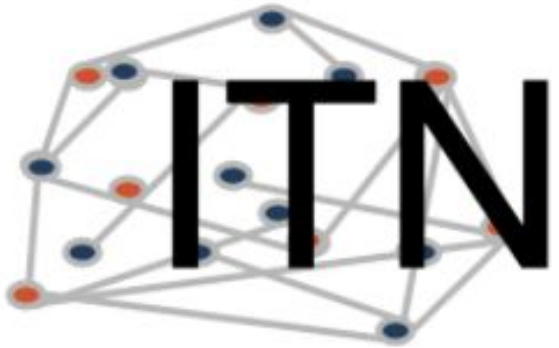
Our method...

What is the ITN?



ITCR **T**raining **N**etwork

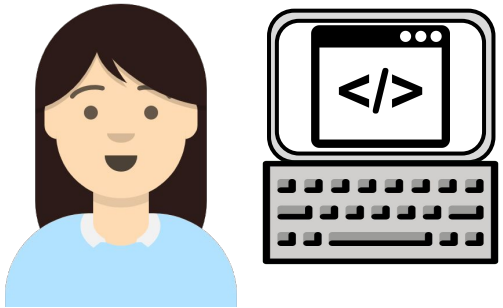
Catalyzing informatics research through training opportunities

itcrtraining.org

Informatics Technology for Cancer Research (ITCR) Training Network

Enhance **usability** for cancer informatics tools

Improve **practices** for informatics work



Enhance **awareness** & **access** for informatics resources

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Elements of ITN:

1. Make courses about informatics
2. Make infrastructure and tools for course creation
3. Provide live education opportunities

Enhance community engagement in cancer research

https://thenounproject.com/ , https://www.iconpacks.net/, https://iconmonstr.com/

The ITN Team

PRIMARY FACULTY

CANDACE SAVONEN

Fred Hutchinson Cancer Center

Formerly at Johns Hopkins Bloomberg School of Public Health

ITCR Content Lead

PRINCIPAL INVESTIGATORS

JEFF LEEK

Fred Hutchinson Cancer Center

Formerly at Johns Hopkins Bloomberg School of Public Health

Program Director

CARRIE WRIGHT

Fred Hutchinson Cancer Center

Formerly at Johns Hopkins Bloomberg School of Public Health

PI for Content (former content lead)

ROHAN D. JEREMIAH

University of Illinois at Chicago

PI for Train the Trainer

JEREMY GOECKS

Oregon Health & Science University

PI for Training Events

TRAIN THE TRAINER / CITIZEN SCIENTIST TEAM

MARCUS MURRAY

Project Brotherhood

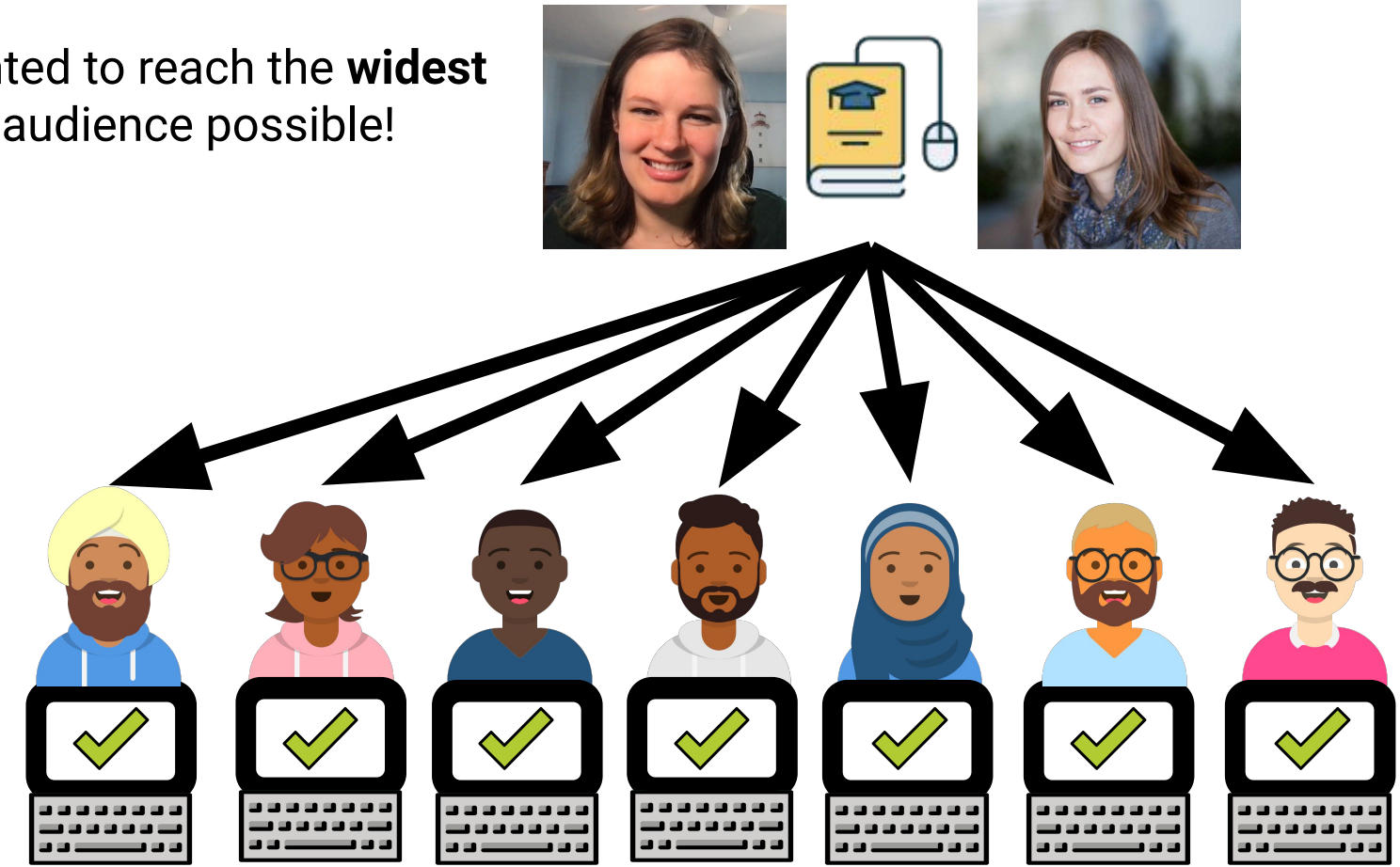
Community Stakeholder & Executive Director of Project Brotherhood

LE'CHAUN KENDALL

University of Illinois at Chicago

Research Coordinator

Wanted to reach the **widest** audience possible!



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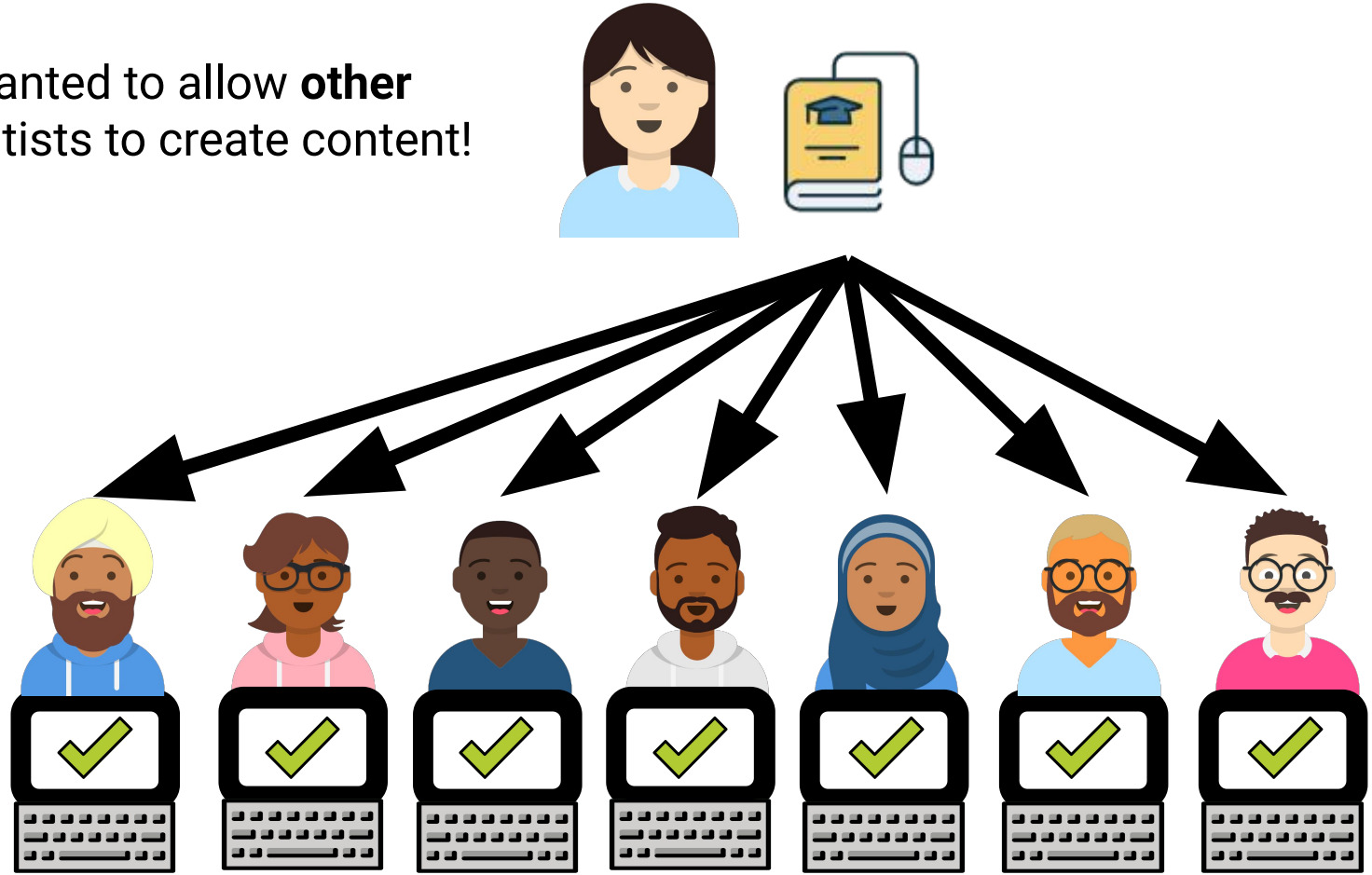
Wanted to allow **other** scientists to create content!



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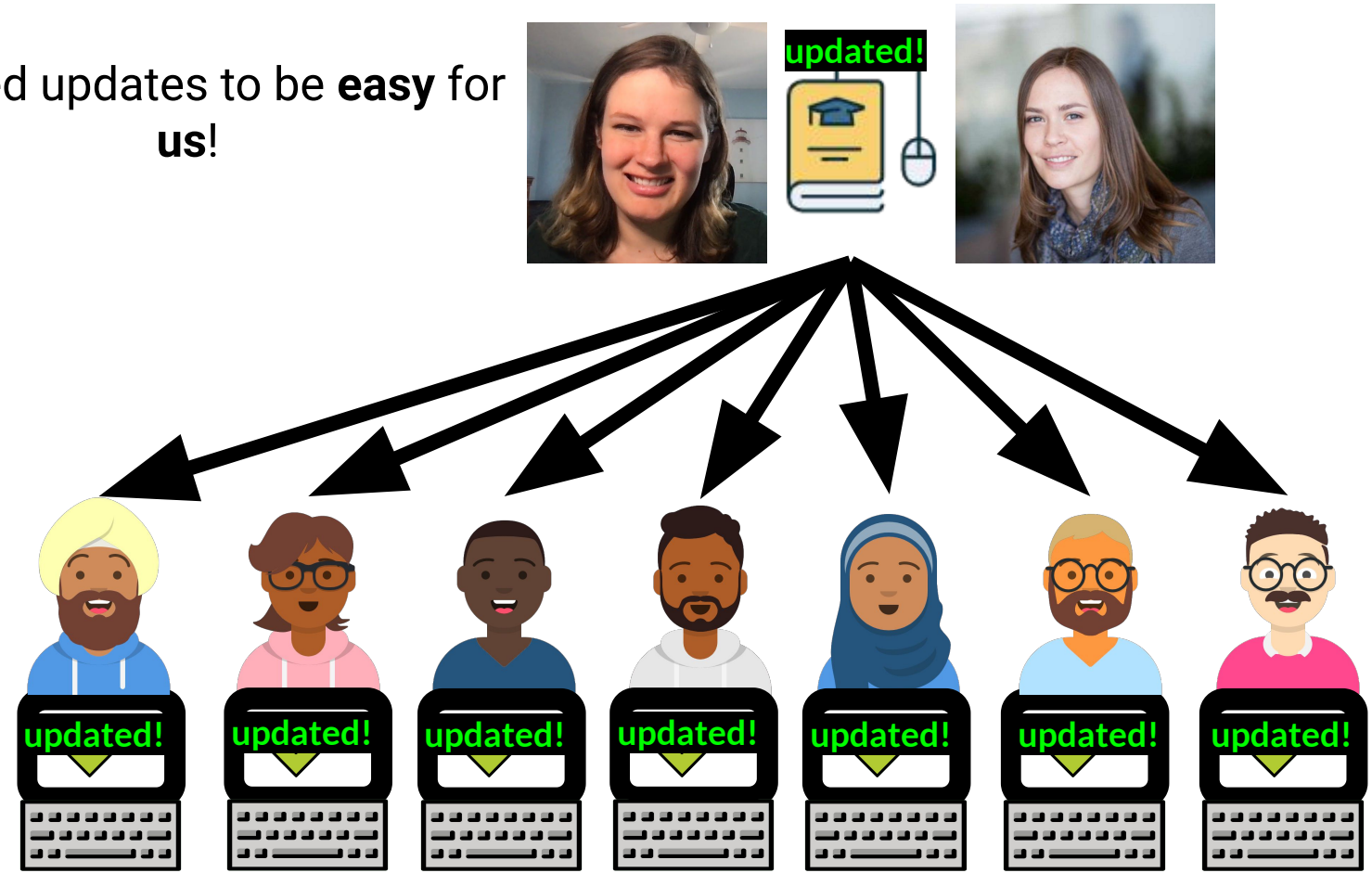
Wanted updates to be **easy** for **us**!



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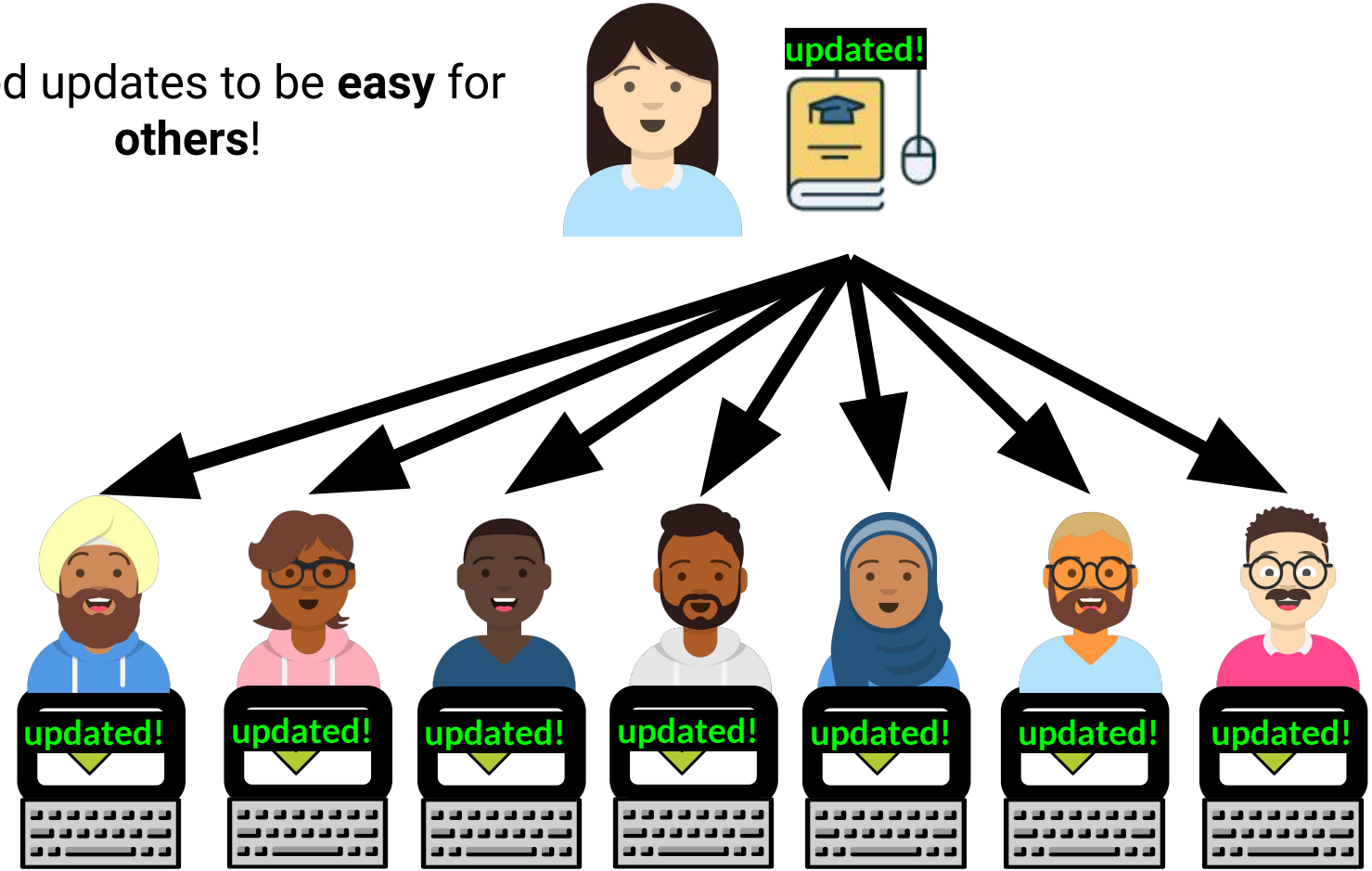
Wanted updates to be **easy** for **others**!



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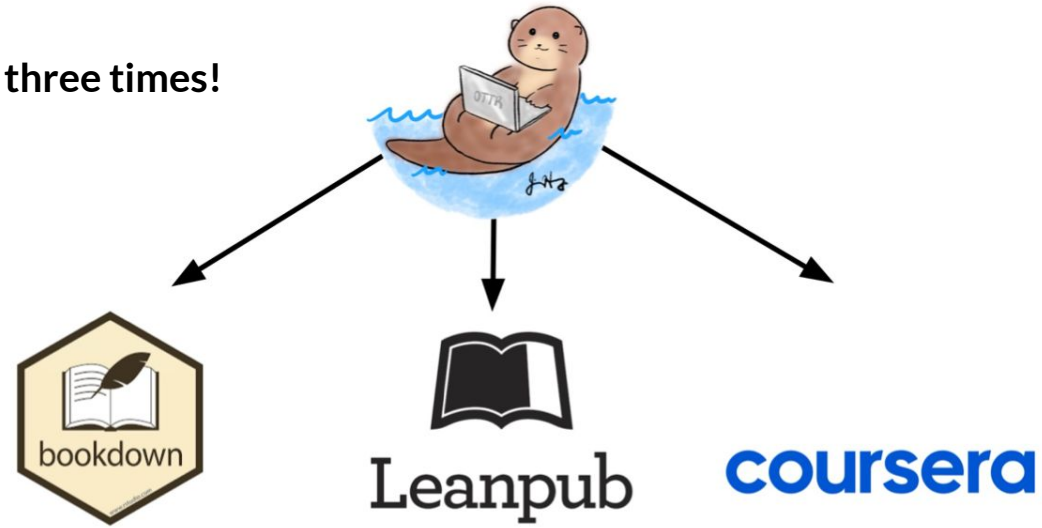
OTTR: **O**pen-source **T**ools for **T**raining **R**esources

ottrproject.org

Open-source Tools for Training Resources

Write once publish three times!



Free for learners No login required	Free or fee for learners	Membership fee for learners
No certification	✅ Includes certification of completion	✅ Includes certification of completion
NA	250k monthly active users	82 million registered users

https://arxiv.org/abs/2203.07083

OTTR: **O**pen-source **T**ools for **T**raining **R**esources

Templates

R packages

Guides

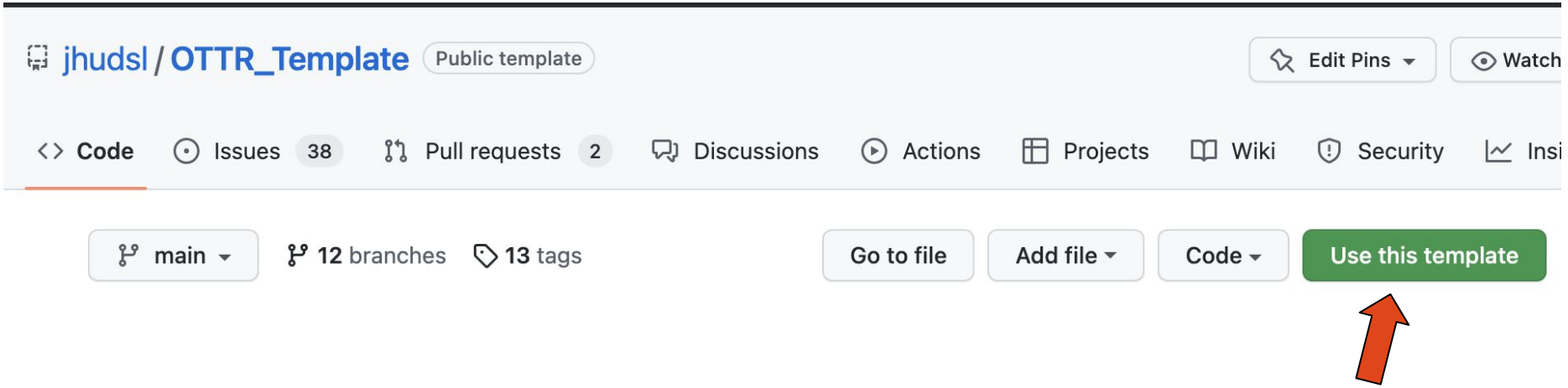
GitHub, GitHub Actions, Docker, YAML, Bookdown/RMarkdown → Maybe Quarto!

ottrpal & cow

ottrproject.org

https://arxiv.org/abs/2203.07083

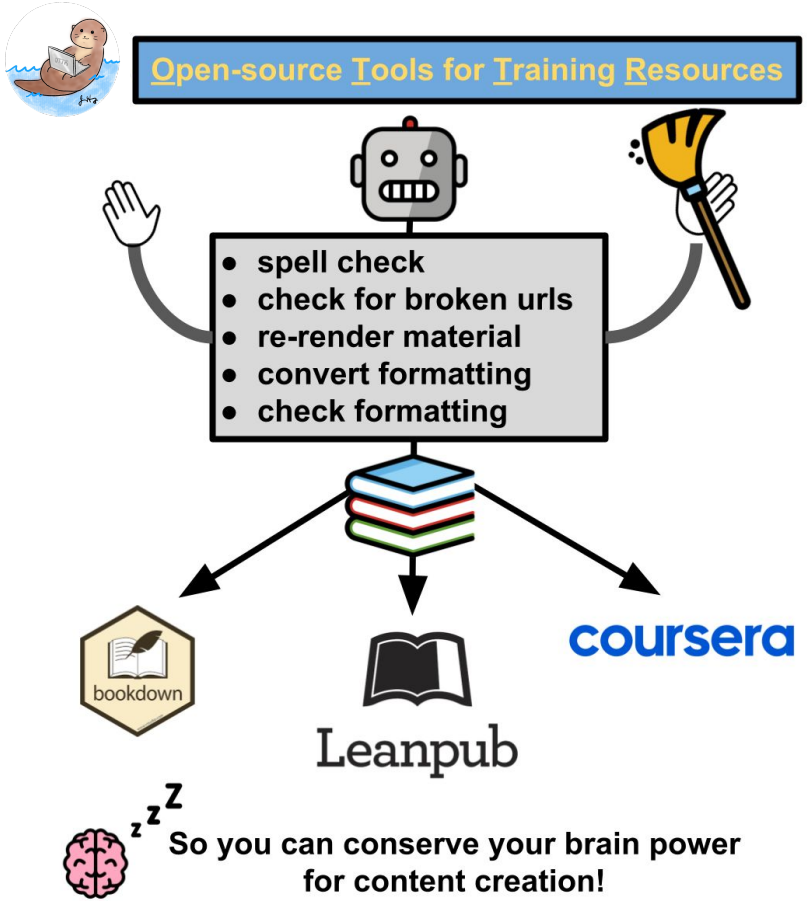
OTTR: **O**pen-source **T**ools for **T**raining **R**esources



And follow this guide: https://www.ottrproject.org/

https://github.com/jhudsl/OTTR_Template

OTTR: Open-source Tools for Training Resources



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Methods of writing content

- Completed entirely from the GitHub website
- More “point and click”
- Less GitHub understanding required

- Allows more flexibility
- Best for users already familiar with GitHub workflows

https://arxiv.org/abs/2203.07083

Current ITN Classes:

1. Leadership for Cancer Informatics Research
2. Documentation & Usability
3. Computing for Cancer Informatics
4. Introduction to Reproducibility
5. Advanced Reproducibility
6. Ethical Data Handling
7. Choosing Genomics tools
8. Software Development beyond Coding - emphasis on impact/engagement analysis

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Want to work with us??

- Contribute to the manuscript/course on methods/challenges of software impact analysis with the TOW
- Take our survey on software impact analysis coming soon!
- Current Positions:
  - Programmer
  - Content Developer
- Collaborations:
  - Create a course about your tool or a topic of interest using OTTR
  - Help us create the courses we are working on

Email cwright2@fredhutch.org

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Thank you!!

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