

Nov 16, 2026

2026 CLM Tutorial

GitHub & CLM Resources

Erik Kluzek

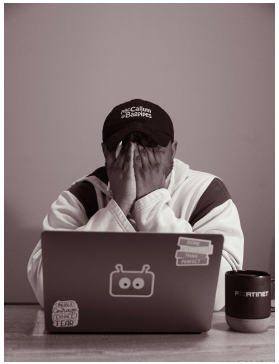
What I want to suss out and answer today…

- Level of comfort/knowledge in computing
- Hopefully knock back the intimidation level
- To show our pages to learn about CLM
- To show how you can contribute
- To affirm that we need all of you involved to continue the torch of CLM science
- We learn best as a community that takes advantage of each strength and helps others through challenges

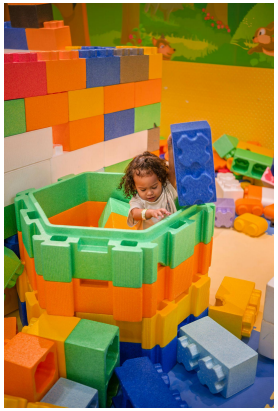
What level of comfort do you have with Git/GitHub/Software stuff?

- In general: 👎 Nope! 👌 OK'ish 👍 Yes 👊 Rock on!
- With Git or Software Version Control? 👎 👌 👍 👊
- With GitHub? 👎 👌 👍 👊

computing can be Intimidating



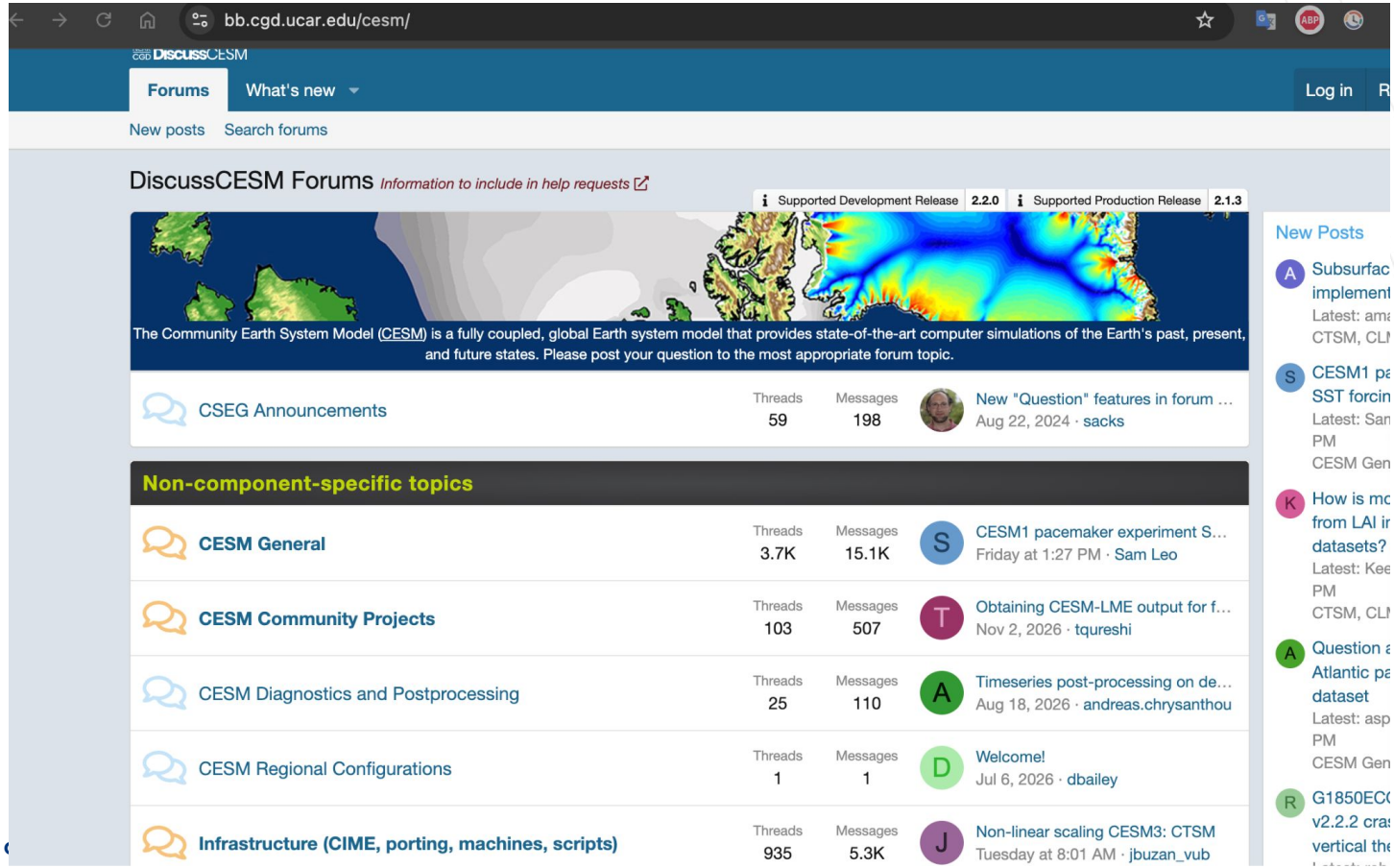
Let's make it playful



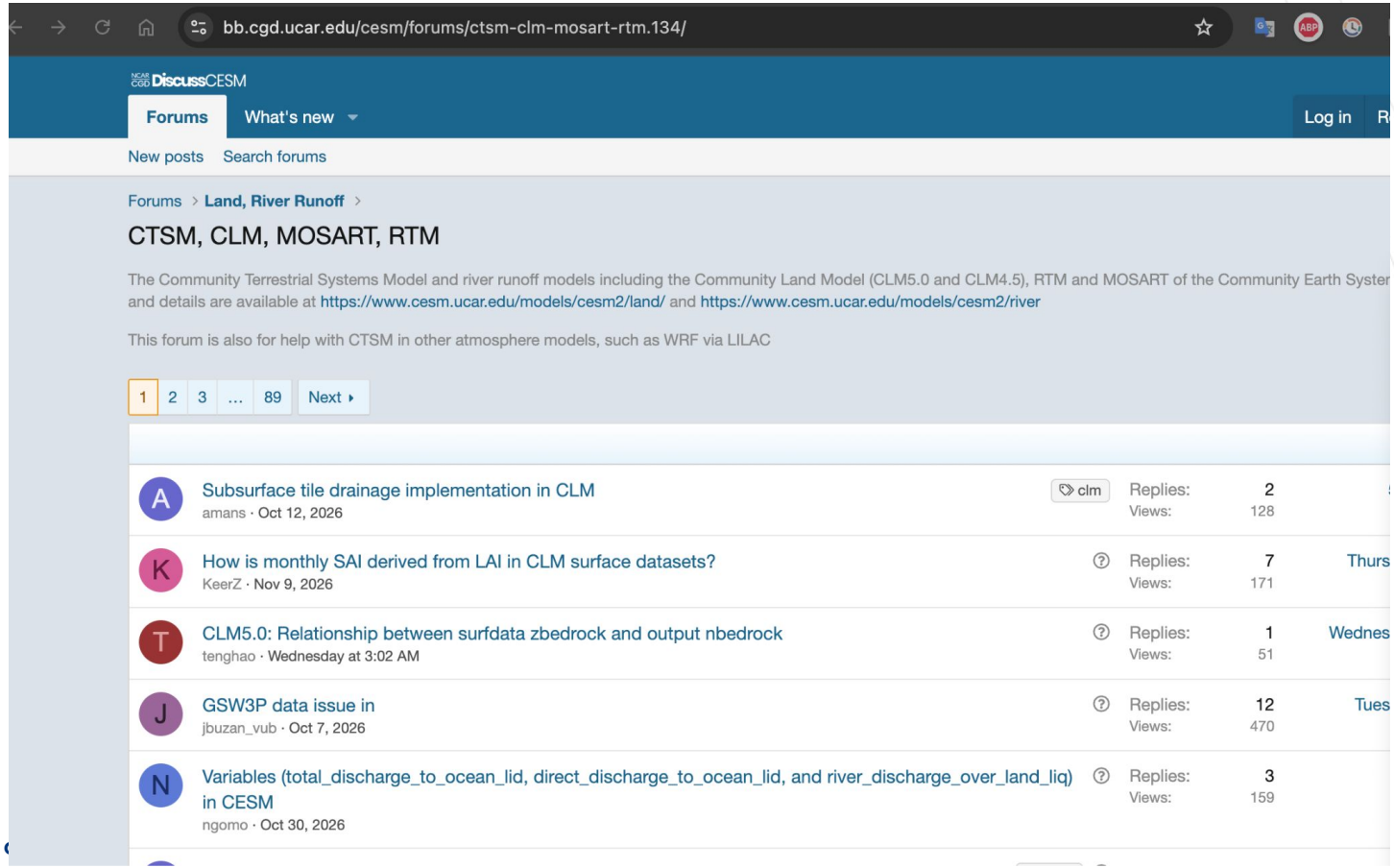
Big picture – resources to go to…

- **Specific problems, questions, porting:** CESM Forums
- **Events, Workshops, CESM/LMWG plans:** CESM webpages
- **To collaborate on CLM Science:** LMWG email lists, co-chairs (from CESM webpages)
- **CLM Science and User's Guide:** Tech Note/User's Guide
- **Everyday status, progress:** CTSM GitHub
  - What's coming in day to day?: doc/ChangeLog/ChangeSum
  - Bigger updates doc/WhatsNewInCTSM*.md
  - Bugs/Issues: GitHub Issues
  - Code Contributions: GitHub Pull Requests

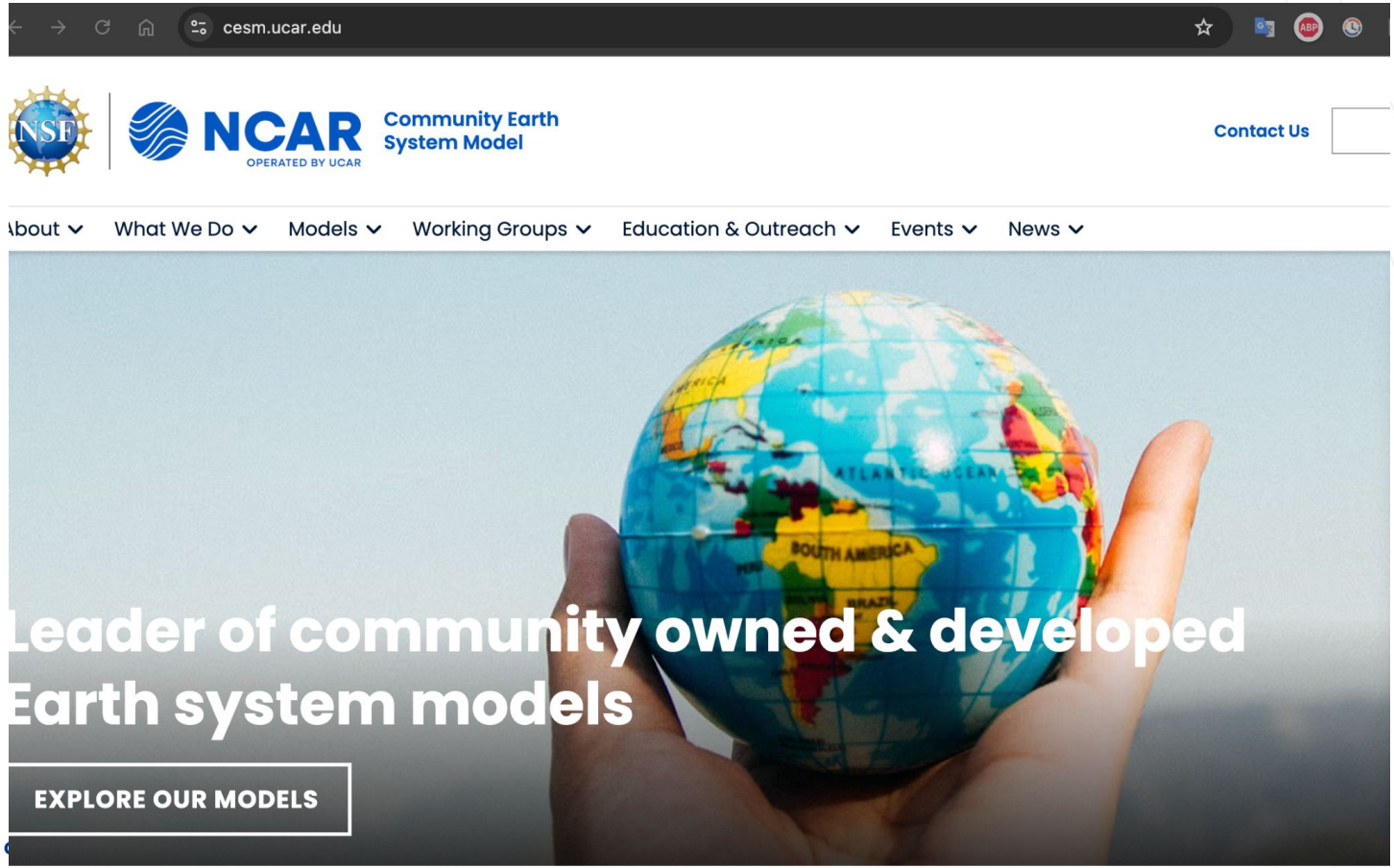
CESM Forums


bb.cgd.ucar.edu/cesm/
DiscussCESM
Forums
What's new
Log in
New posts
Search forums
DiscussCESM Forums
Information to include in help requests
Supported Development Release 2.2.0
Supported Production Release 2.1.3
The Community Earth System Model (CESM) is a fully coupled, global Earth system model that provides state-of-the-art computer simulations of the Earth's past, present, and future states. Please post your question to the most appropriate forum topic.
CSEG Announcements
Threads 59
Messages 198
New "Question" features in forum ...
Aug 22, 2024 · sacks
Non-component-specific topics
CESM General
Threads 3.7K
Messages 15.1K
CESM1 pacemaker experiment S...
Friday at 1:27 PM · Sam Leo
CESM Community Projects
Threads 103
Messages 507
Obtaining CESM-LME output for f...
Nov 2, 2026 · tqureshi
CESM Diagnostics and Postprocessing
Threads 25
Messages 110
Timeseries post-processing on de...
Aug 18, 2026 · andreas.chrysanthou
CESM Regional Configurations
Threads 1
Messages 1
Welcome!
Jul 6, 2026 · dbailey
Infrastructure (CIME, porting, machines, scripts)
Threads 935
Messages 5.3K
Non-linear scaling CESM3: CTSM
Tuesday at 8:01 AM · jbuzan_vub
New Posts
Subsurfac
implement
Latest: ama
CTSM, CLM
CESM1 pa
SST forcin
Latest: San
PM
CESM Gen
How is mo
from LAI ir
datasets?
Latest: Kee
PM
CTSM, CLM
Question a
Atlantic pa
dataset
Latest: asp
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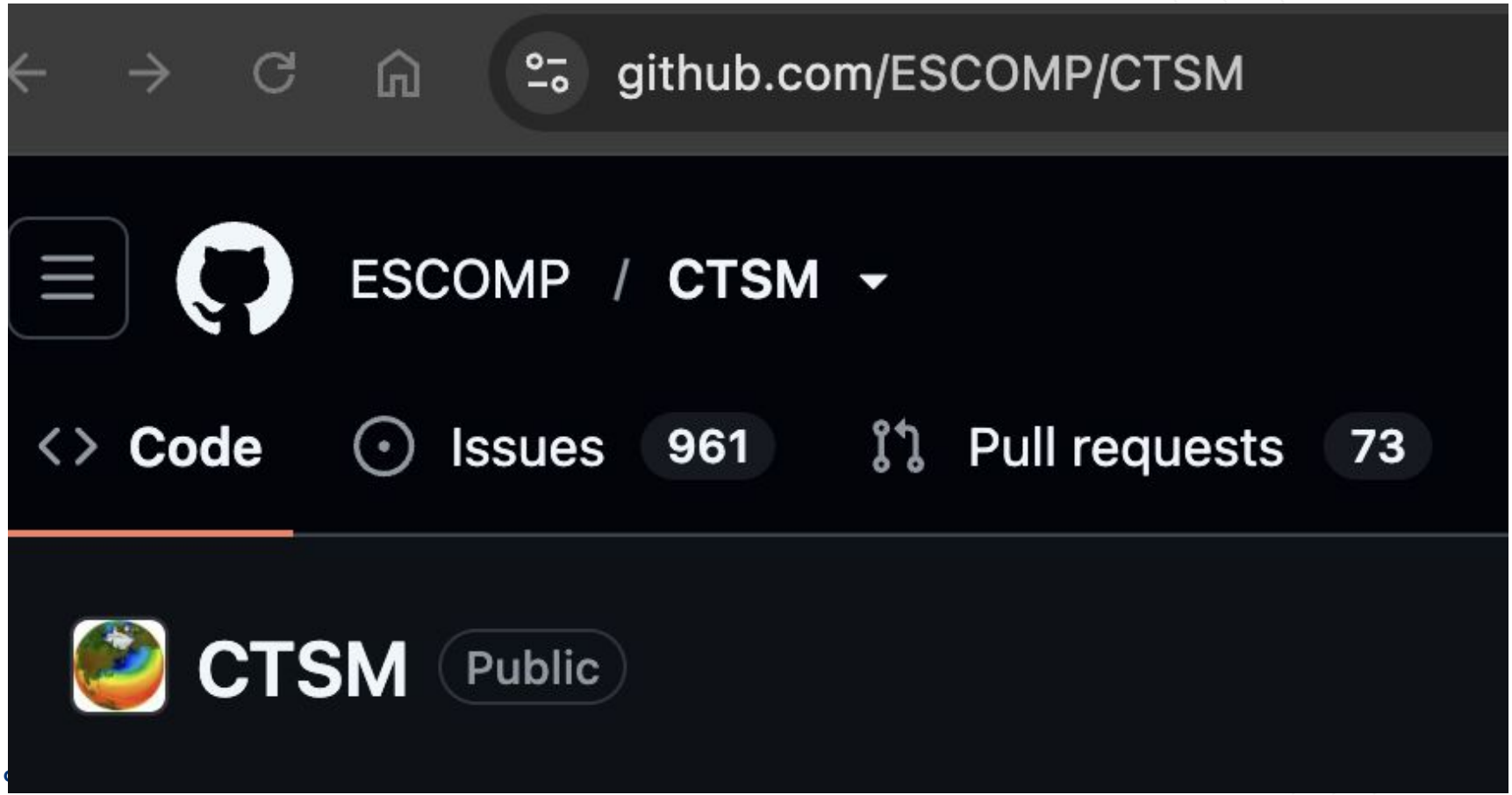
LMWG Specific Forum



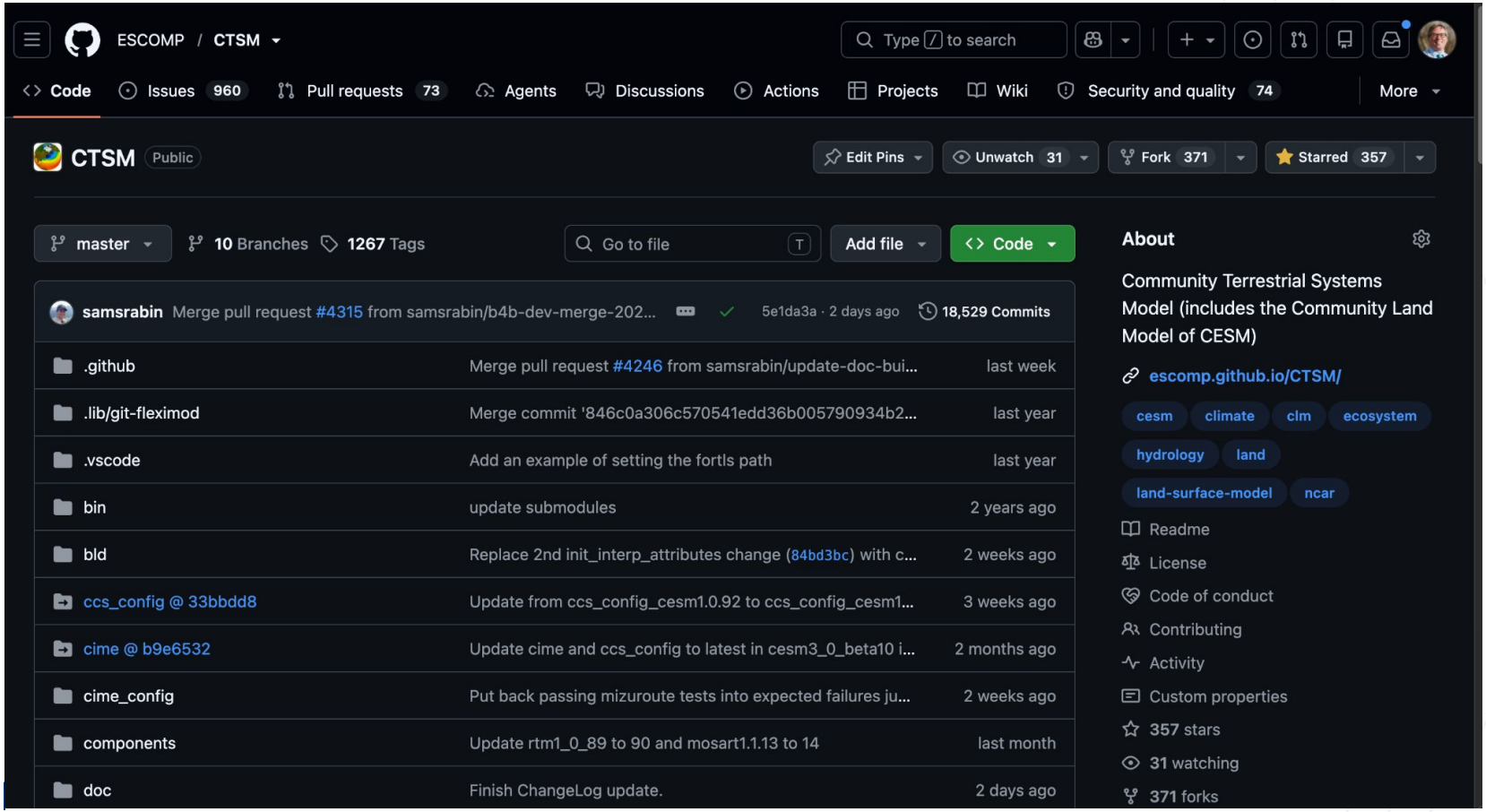
CESM Web Pages



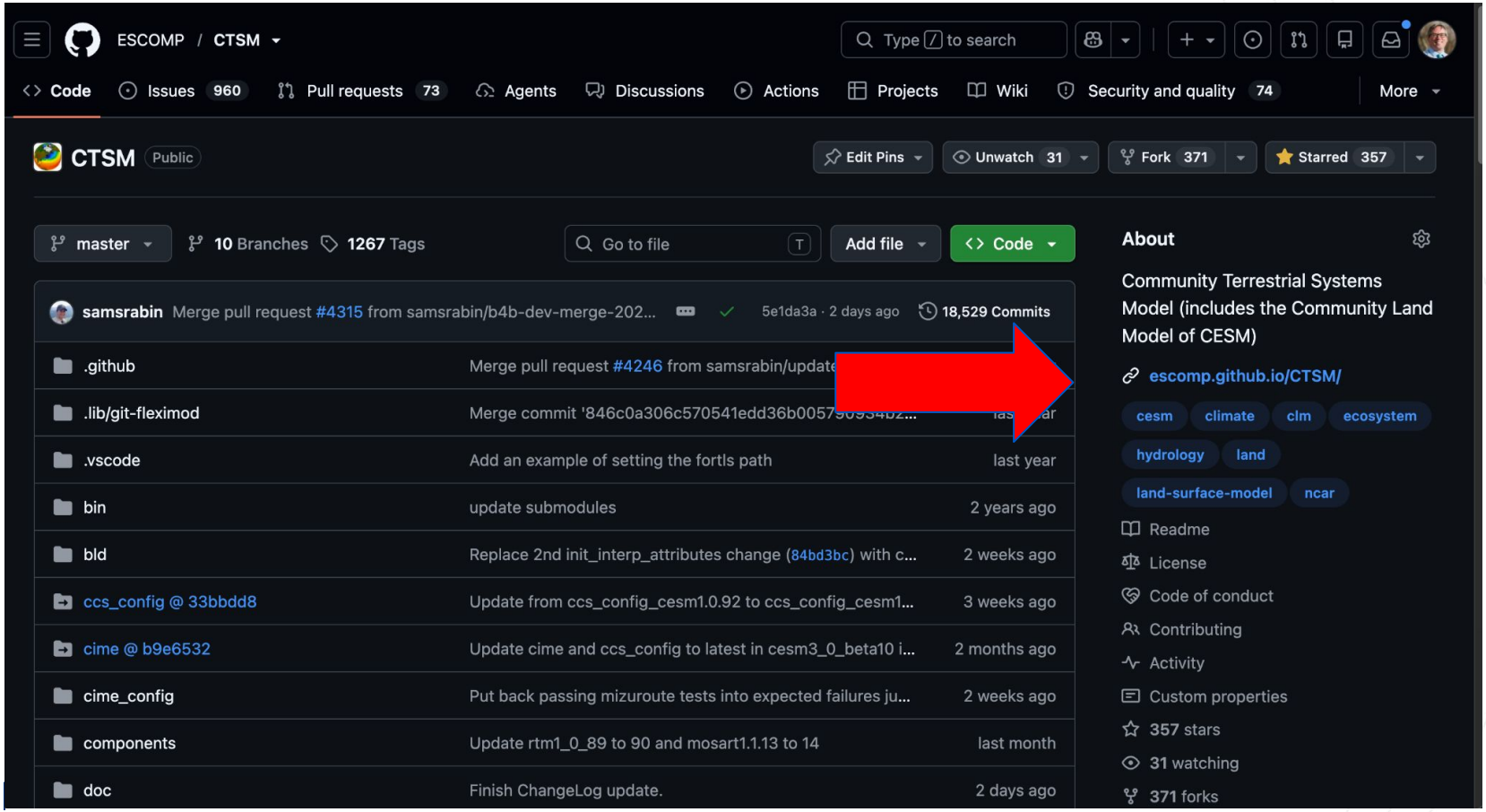
CTSM GitHub Home Page: github.com/ESCOMP/CTSM.git



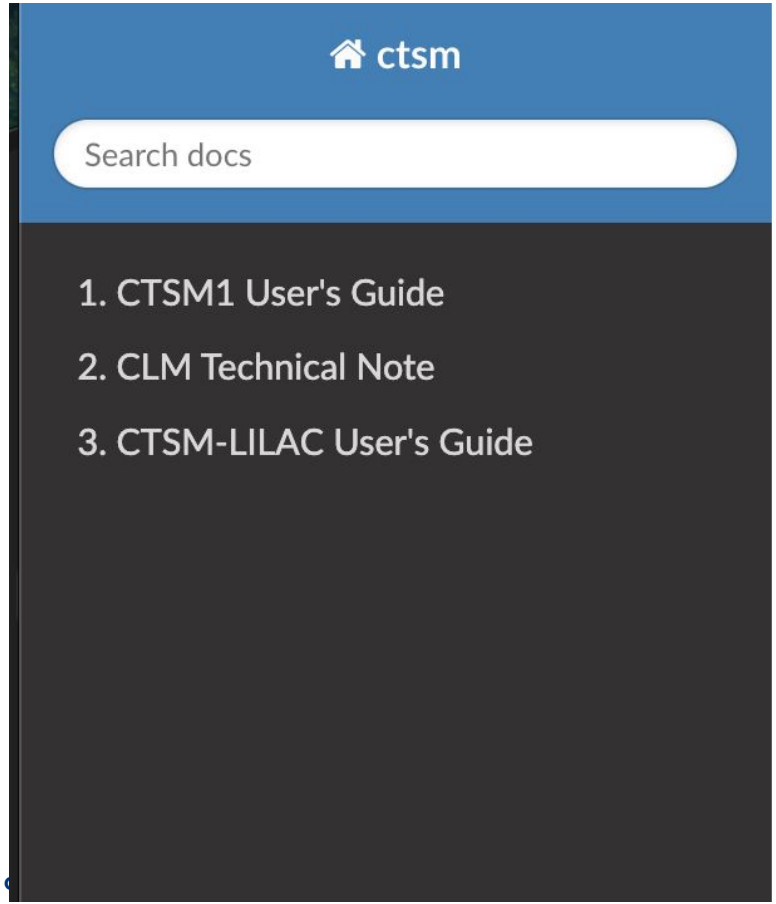
CTSM GitHub Home Page

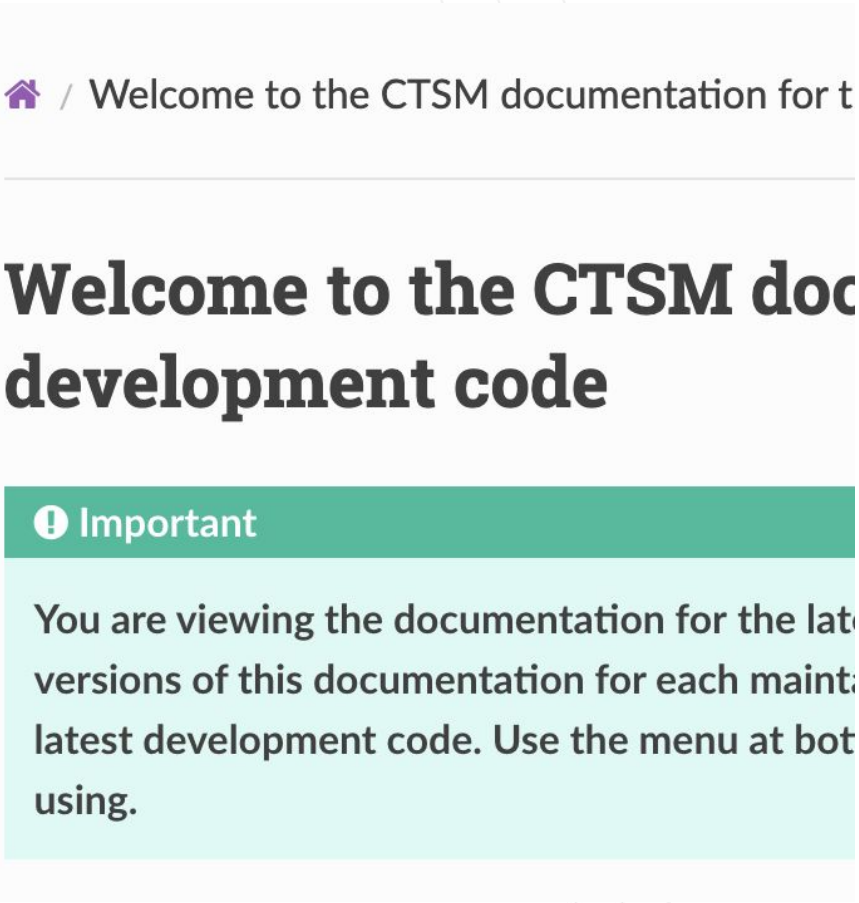


Most importantly – how to go to the User's Guide and Tech Note

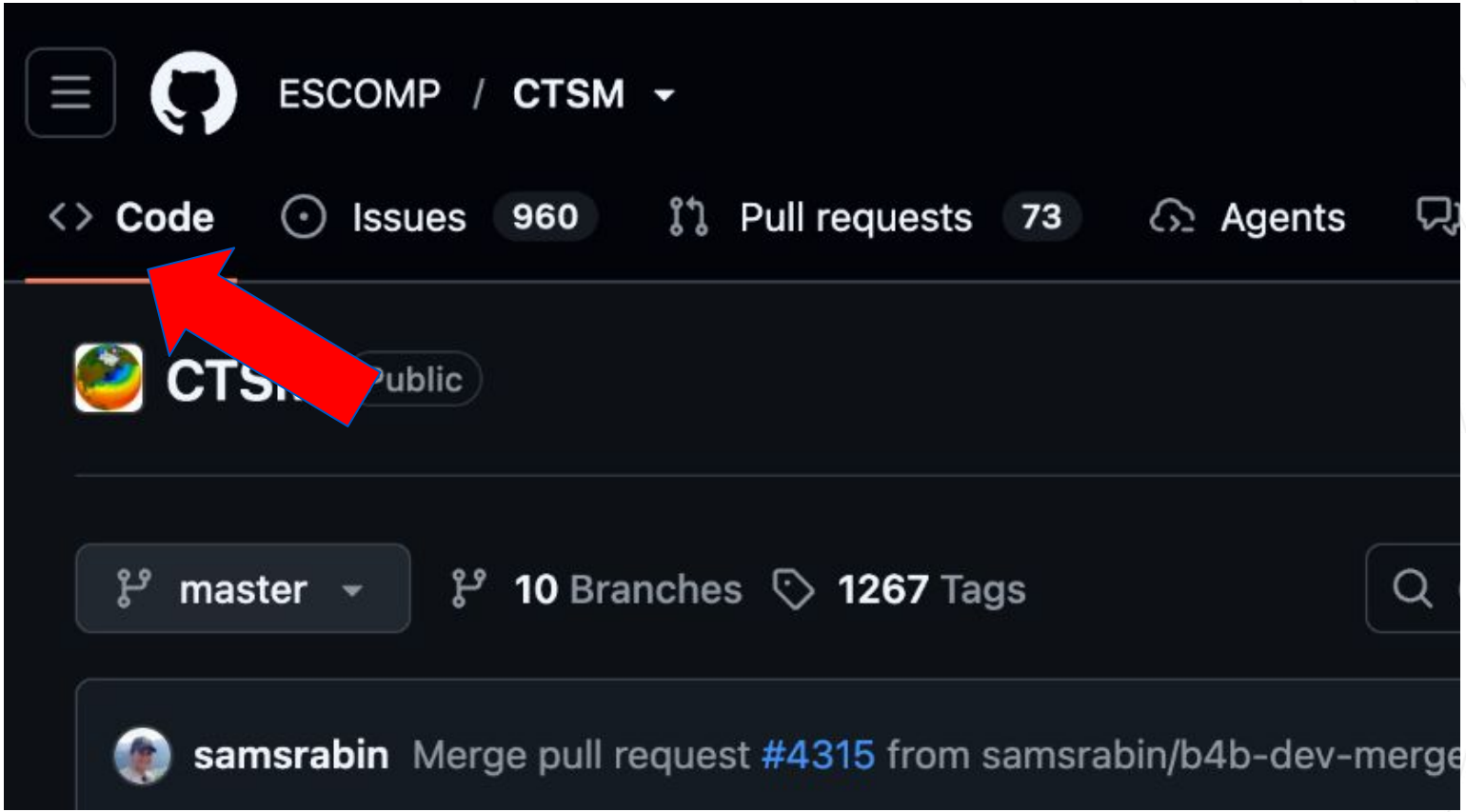


Documentation landing page



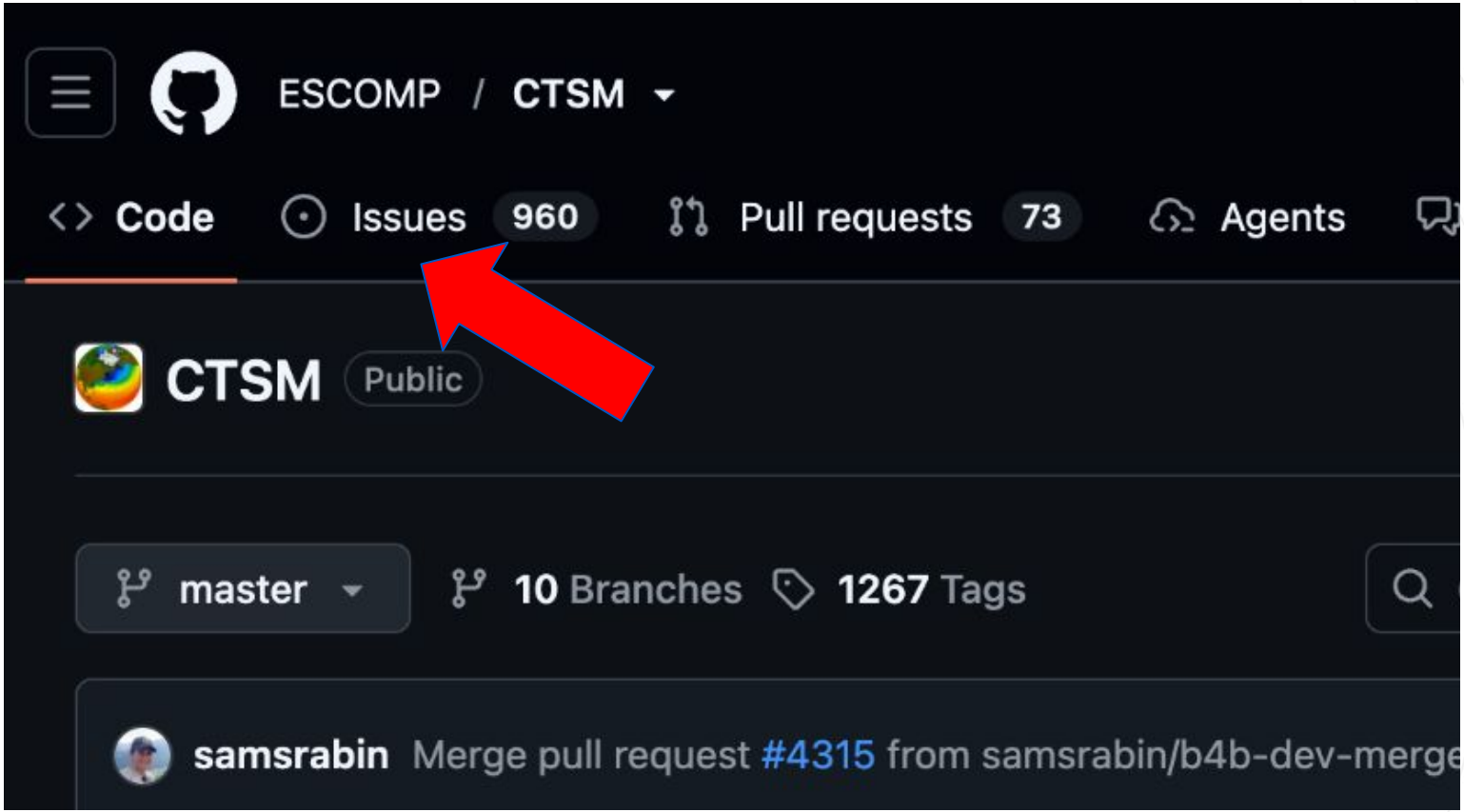


Let’s focus in — first on Code

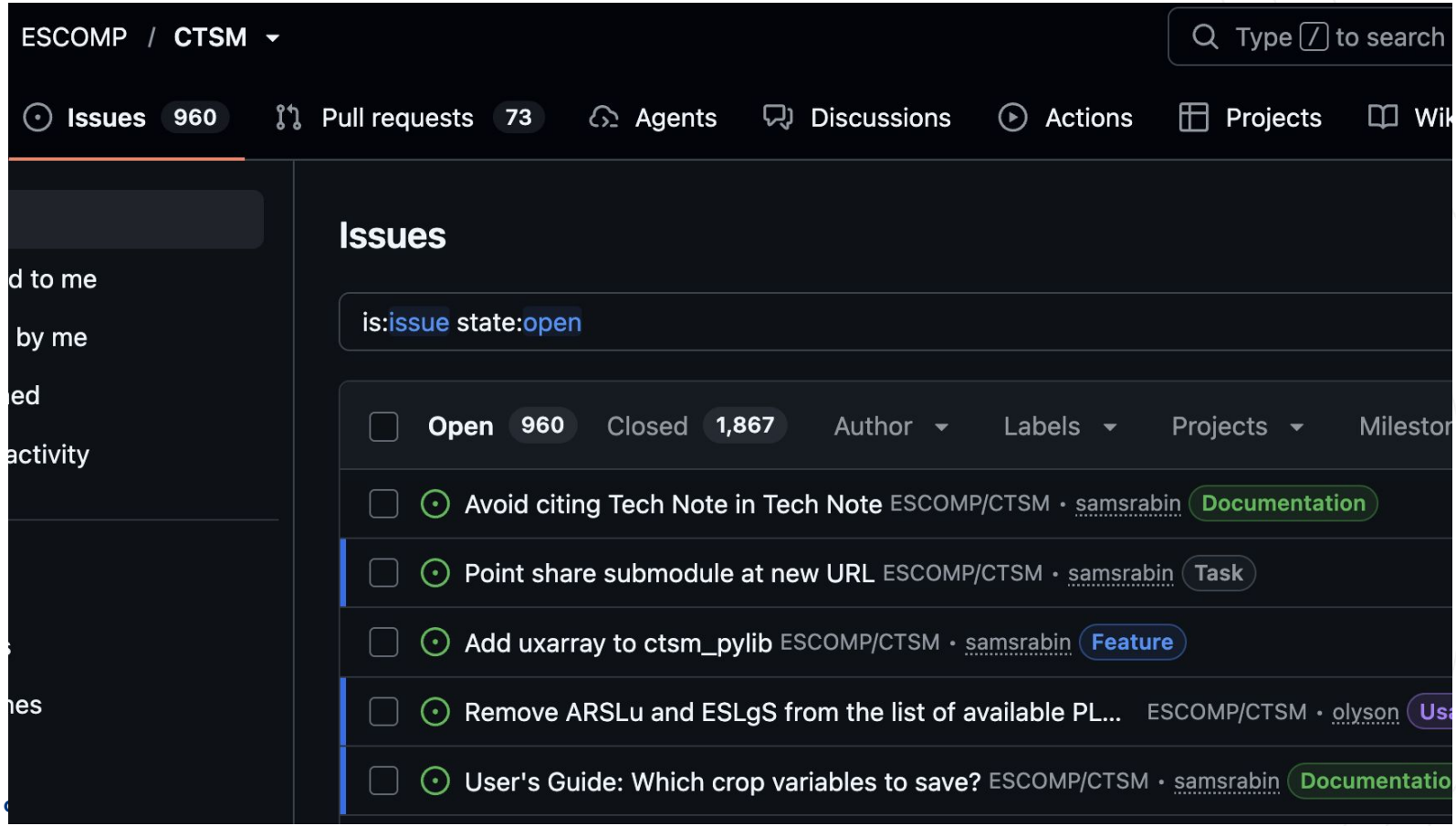


- **Commit:** You add a set of changes to a file or files
- **Branch:** A separate line of development of the code base for a given purpose (master, feature branch)
- **Tag:** A name you give the code base for a frozen point in time
- **Release:** A special declaration that we give to a tag, that means it's been more tested and reviewed. For CLM it also means there's a DOI for it – hence publishable.

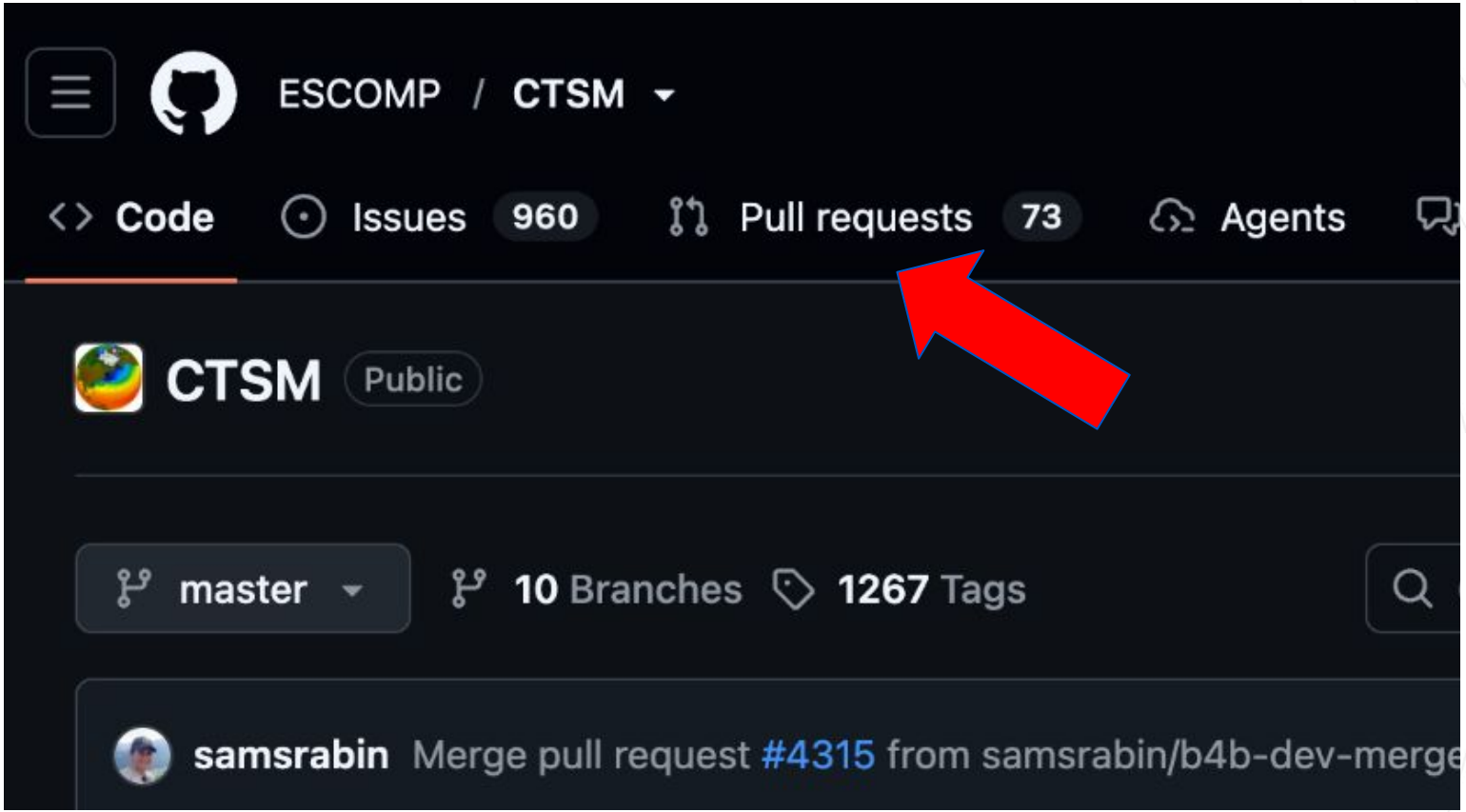
Second Issues (either bugs or changes to make intentionally)



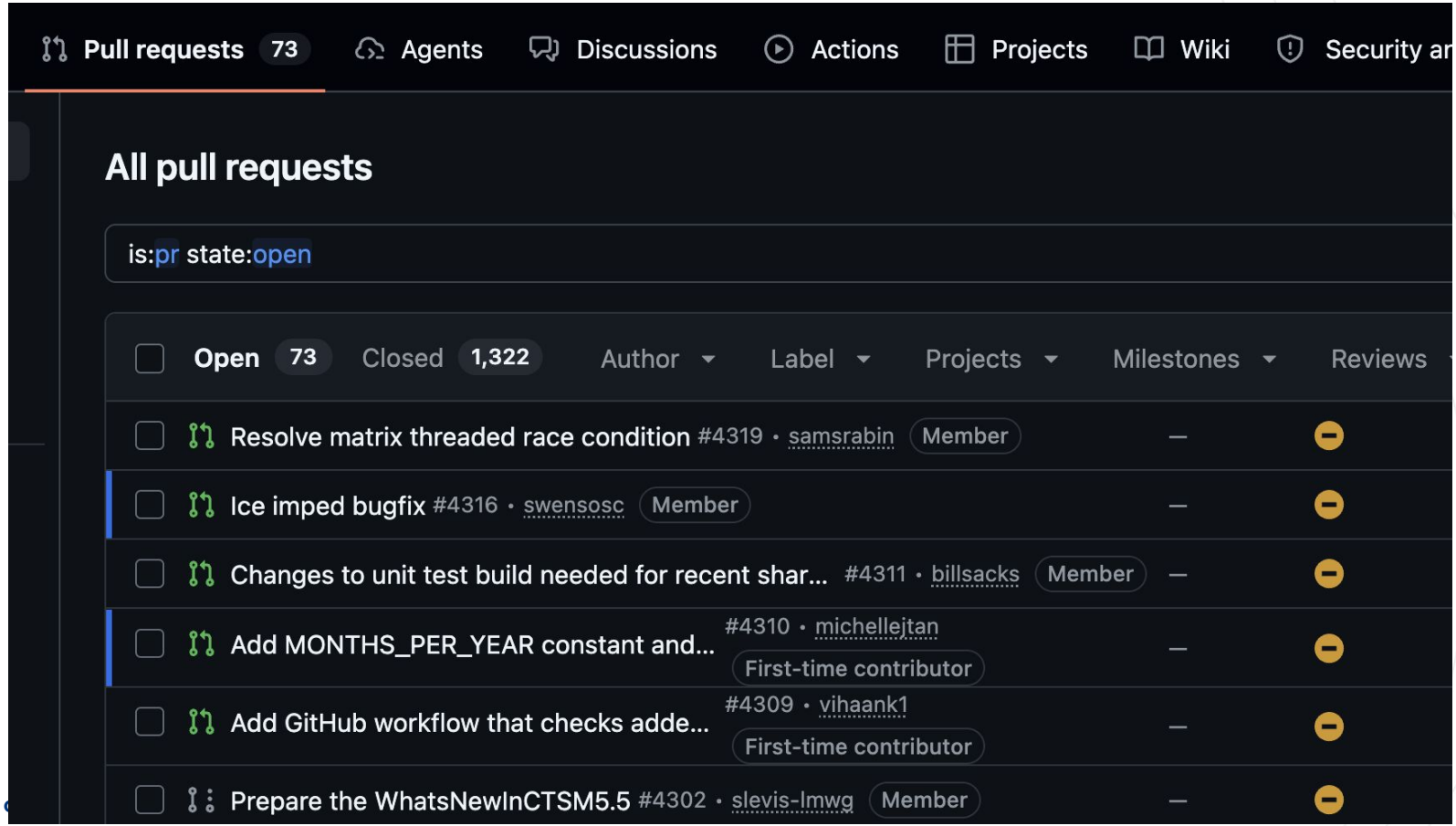
Issues home


ESCOMP / CTSM
Type / to search
Issues 960
Pull requests 73
Agents
Discussions
Actions
Projects
Issues
is:issue state:open
Open 960
Closed 1,867
Author
Labels
Projects
Avoid citing Tech Note in Tech Note ESCOMP/CTSM • samsrabin Documentation
Point share submodule at new URL ESCOMP/CTSM • samsrabin Task
Add uxarray to ctsm_pylib ESCOMP/CTSM • samsrabin Feature
Remove ARSLu and ESLgS from the list of available PL... ESCOMP/CTSM • olyson
User's Guide: Which crop variables to save? ESCOMP/CTSM • samsrabin

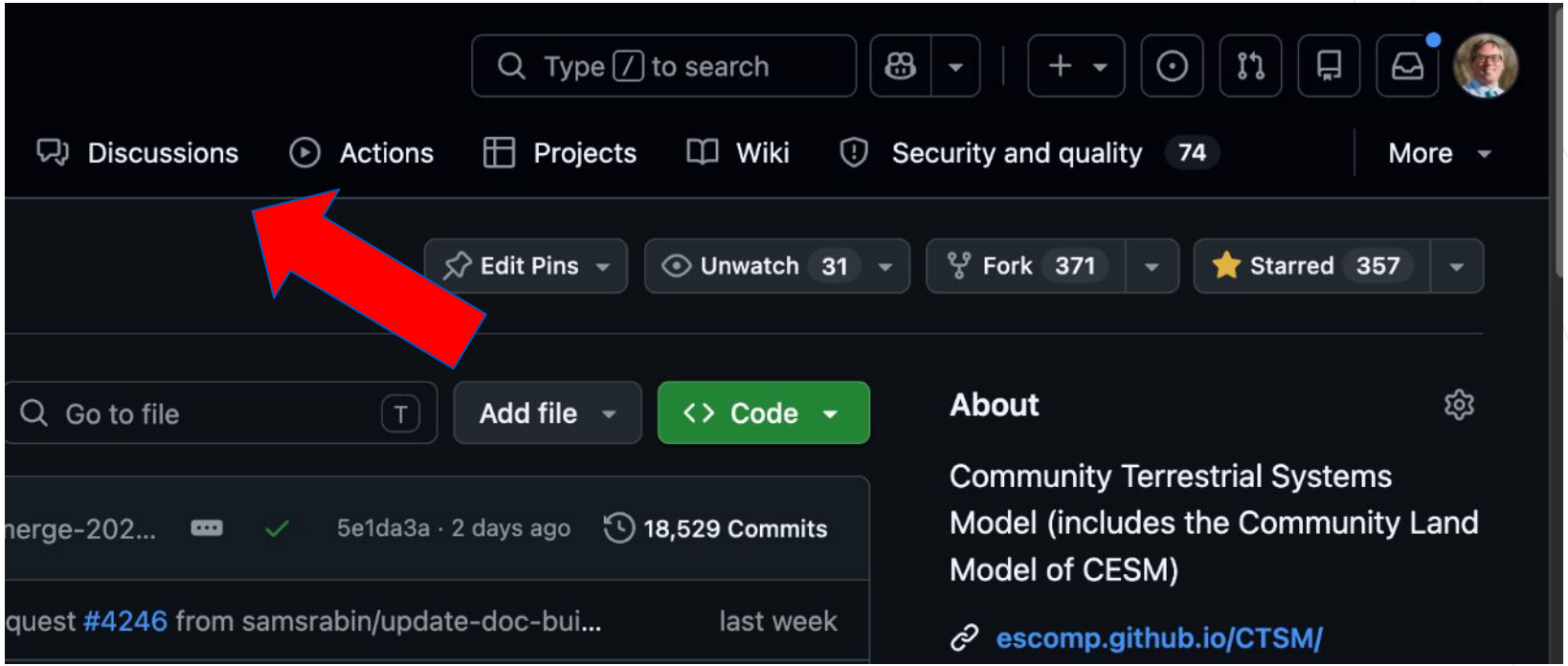
Third Pull Requests (which are contributions of code changes)



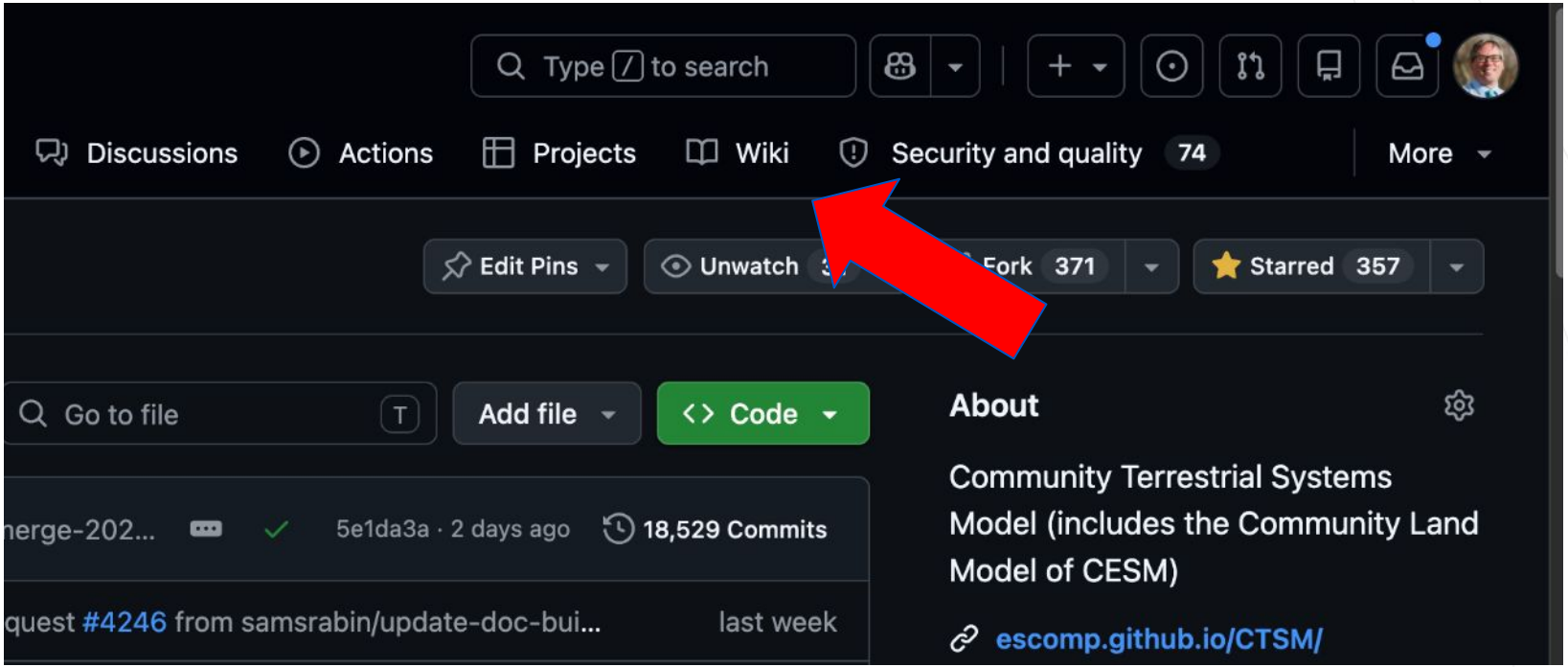
PR's Home Page



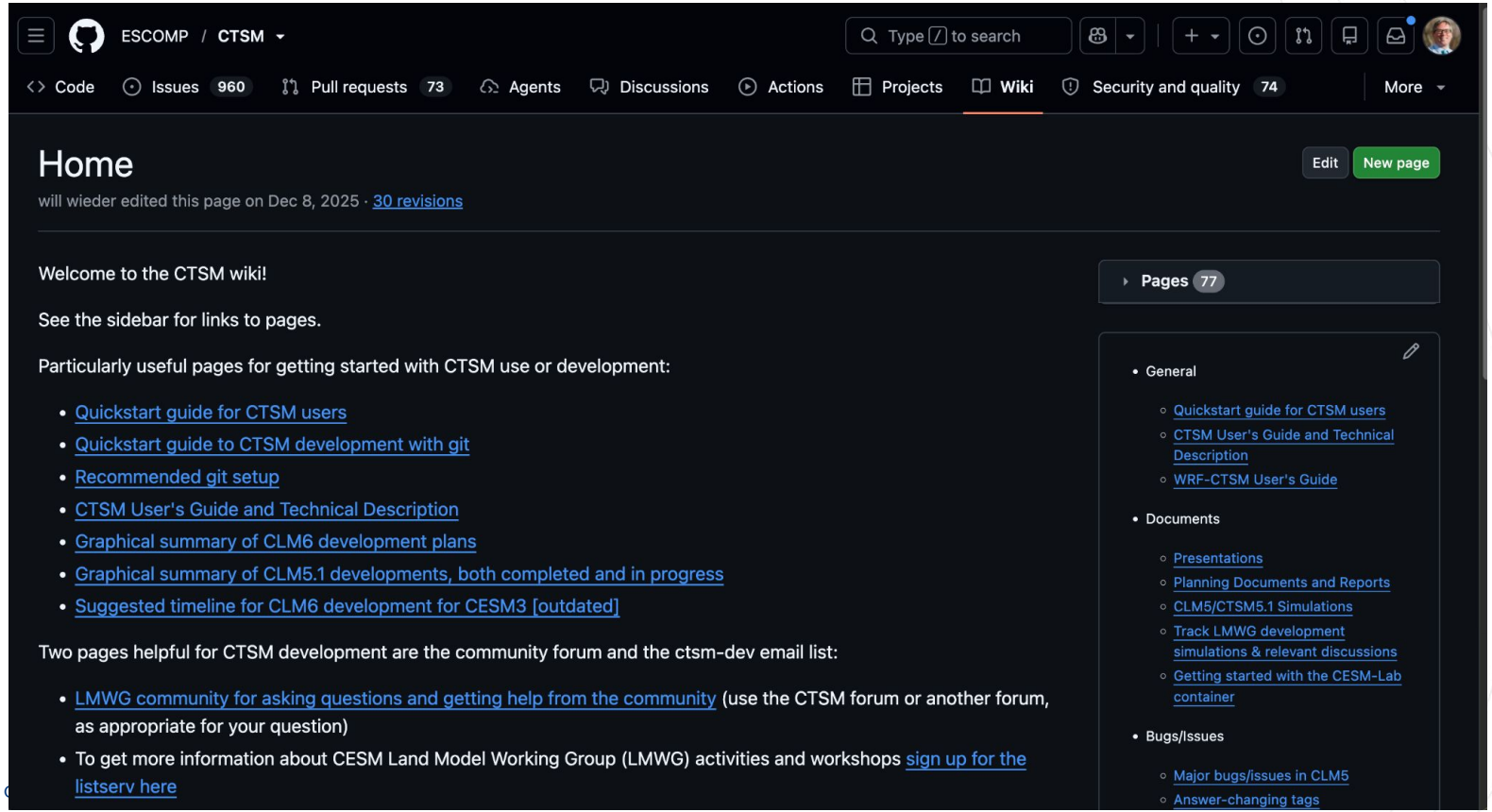
And all the way to the right: Fourth Discussions…



Fifth Wiki


Type / to search
Discussions
Actions
Projects
Wiki
Security and quality 74
More
Edit Pins
Unwatch
Fork 371
Starred 357
Go to file
T
Add file
Code
About
Community Terrestrial Systems Model (includes the Community Land Model of CESM)
5e1da3a · 2 days ago
18,529 Commits
last week
escomp.github.io/CTSM/

Wiki Home Page



Wiki Nav bar on the right Highlights

- General
- Documents
- Bugs/Issues
- Tutorials

- Development guides
- Meetings
- Notes

Quickly tabs we are ignoring

- **Insights (in the More part):** Show contributors and our pace
- **Projects:** Mostly internal on projects we are working on
- **Actions:** To show the automated checking
- **Agents:** AI agents, mostly internal

Things you should do…

- Sign up for CESM/LMWG email lists
- Talk to LMWG co-chairs about your science
- Join the LMWG meetings
- Get your own GitHub
- Look through all of the resources we just listed
- Make your own fork of CTSM on GitHub
- Star CTSM GitHub

Finally Questions?

