Pre-survey

https://forms.gle/bDg5nHR38DWfuofj9

PEARC20 HackHPC Kick-Off

July 27, 2020

If you have not yet joined the Slack Channel, you are missing out!

https://cloudhpchack.slack.com/

Presenter: Je'aime Powell

Organizers

Alex Nolte - *University of Tartu*
alexander.nolte@ut.ee

Amy Cannon - *Omnibond*
amycannon@omnibond.com

Boyd Wilson - *Omnibond*
boyd@omnibond.com

Je'aime Powell - *TACC*
jpowell@tacc.utexas.edu

Linda Hayden - *ECSU*
haydenl@mindspring.com

Agenda

- Code of Ethics - Alex Nolte
- Judging Criteria - Alex Nolte
- Schedule (Brella) - Je’aime Powell
- Deliverables - Je’aime Powell
- Communications Channels - Je’aime Powell
- Introduction to Mentors - Je’aime Powell

Presenter: Alex Nolte

Ethics and Judging Criteria

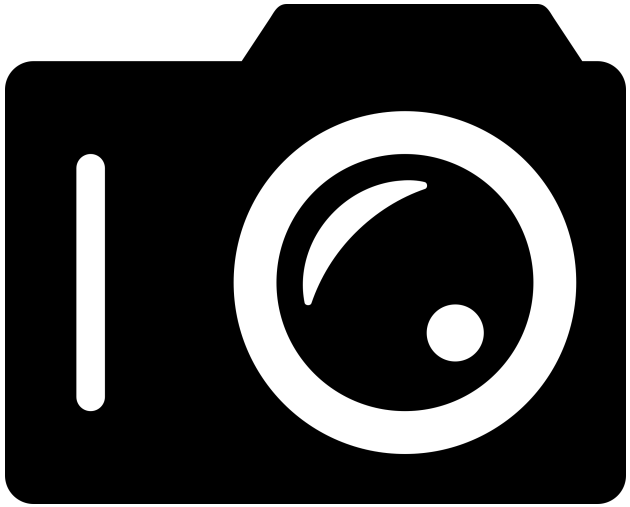
Presenter: Alex Nolte

https://sciencegateways.org/engage/hackathon/hackathon-code-of-conduct

Everybody is welcome!


HARASSMENT


SPEAK UP



… but not everywhere and at any time!

Judging criteria

6 criteria with 100 points max. per judge

Viability / Usefulness

Does the project have a realistic chance to get continued / adopted by the gateway for which it was developed? Is it realistic to build it? (20 points)

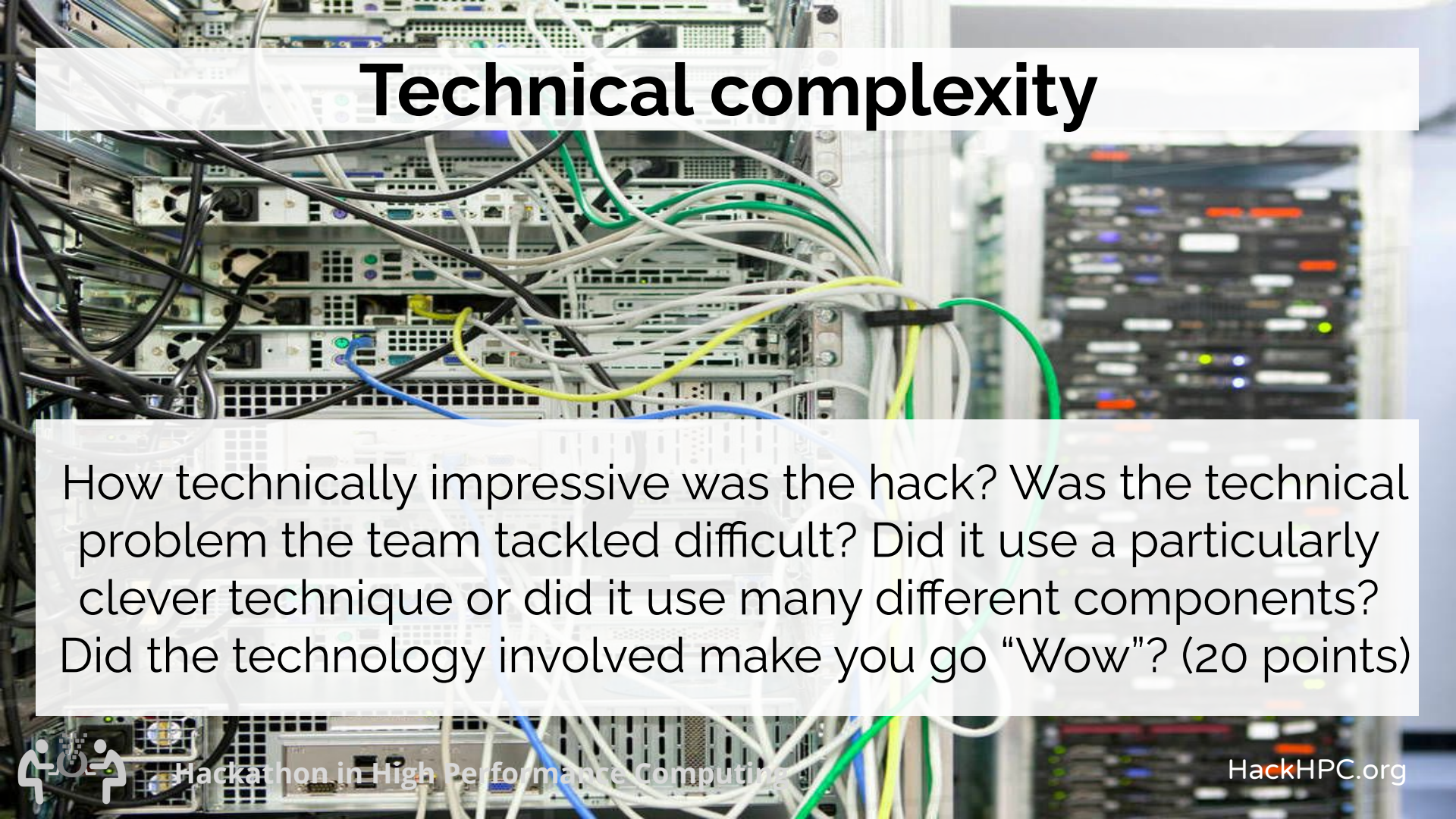
Creativity of execution / Wow-effect

How creative is the execution of the project? Did the team come up with new use-cases, big opportunities or surprises? Novelty elements. (20 points)

UX / Polish

How is the design and user experience of the project? Is it easy to understand and use? Did the team put thought into the user experience? (10 points)

Technical complexity

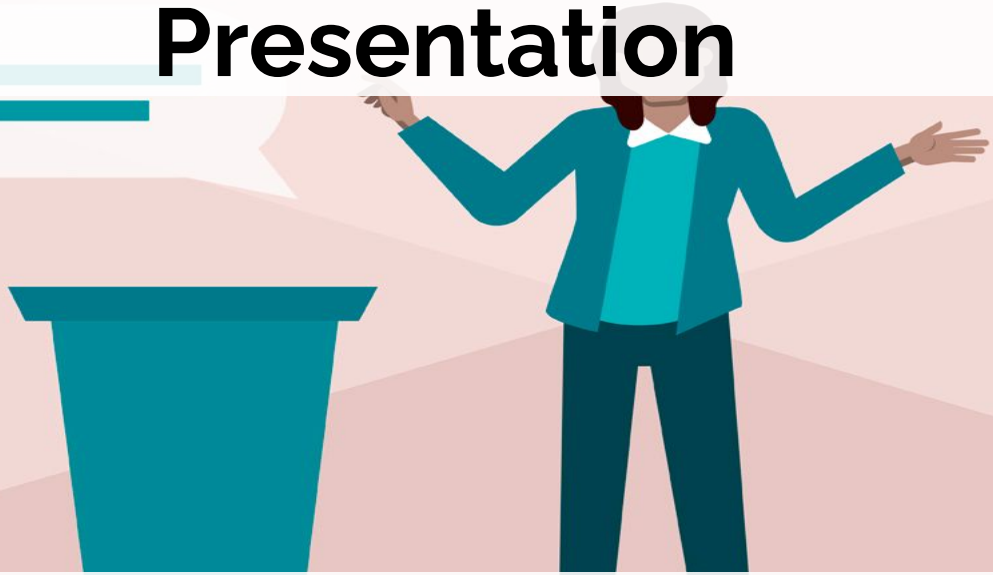


How technically impressive was the hack? Was the technical problem the team tackled difficult? Did it use a particularly clever technique or did it use many different components? Did the technology involved make you go “Wow”? (20 points)

Collaboration

Did the team achieve everything they wanted? How well did the team collaborate? (20 points)

Presentation



Did the team present a functioning solution? Did the team stay within the time limit of their presentation? Was the team able to communicate their project and the value it has for the respective gateway? (10 points)

Challenge Completed

Does the solution provided by the team solve the posed challenge? (20 points)

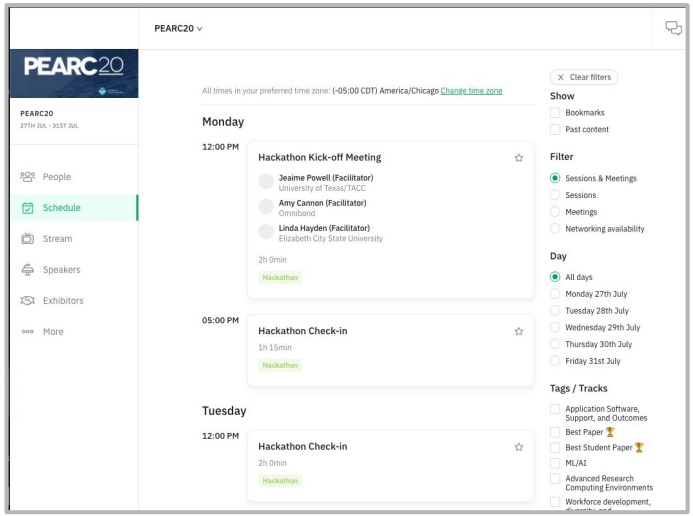
Schedule

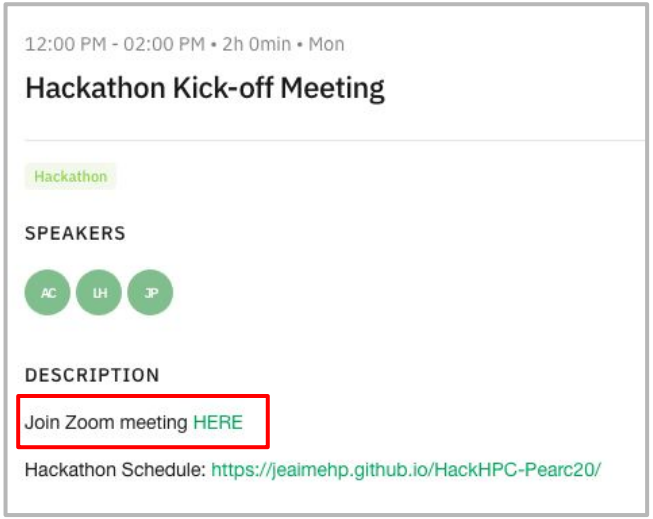
Event Site:
https://jeaimehp.github.io/HackHPC-Pearc20/

Day	Time	Activities
Monday (7/27)	1:00p(EST)/12:00p(CT)/10:00a(PT)	**Kickoff Meeting** - Ethics - Schedule - Deliverables Overview - Active Hacking Picture (Individual) [Prize] - Google Project Setup Boyd Wilson
Monday (7/27)	6:00p(EST)/5:00p(CT)/3:00p(PT)	- Project Introductions and Goals by the teams [Prize] - Intel Speaker Tom Krueger - Team Virtual Background Challenge [Prize]
Tuesday (7/28)	1:00p(EST)/12:00p(CT)/10:00a(PT)	- Status Checkpoint - Lego@HackHPC Picture (Individual) [Prize] - Cloudy Cluster Overview Boyd Wilson
Tuesday (7/28)	6:00p(EST)/5:00p(CT)/3:00p(PT)	- Status Checkpoint - TBD [Prize]
Wednesday (7/29)	6:00p(EST)/5:00p(CT)/3:00p(PT)	**Final Presentations** - People's Choice Award Opens
Thursday (7/30)	1:00p(EST)/12:00p(CT)/10:00a(PT)	**Awards Ceremony**

Connecting to Sessions

All Zoom sessions will have links provided by **Brella.io**





Participating Mentors Introductions

- **Boyd Wilson** - *Omnibond*
  - Take a gateway of choice and port it to the cloud using CloudyCluster (CC) or
  - JupyterLab Interface for WRF on CC

- **Sudhakar Pamidighantam** - *IU*
  - Create Workflows and Django plugins for post processing data

- **Joon Yee Chuah** - *TACC*
  - Repeatable example of how to aggregate data, generate a visualization using Dash or another visualization technology, and publish the data in an automated fashion

- **Je'aime Powell** - *TACC*
  - GCP-based Science Gateway Base

- **Charlie Dey** - *TACC*
  - Data interface and plotting for jupyter notebooks

- **Brandi Kuritz** - *TACC*

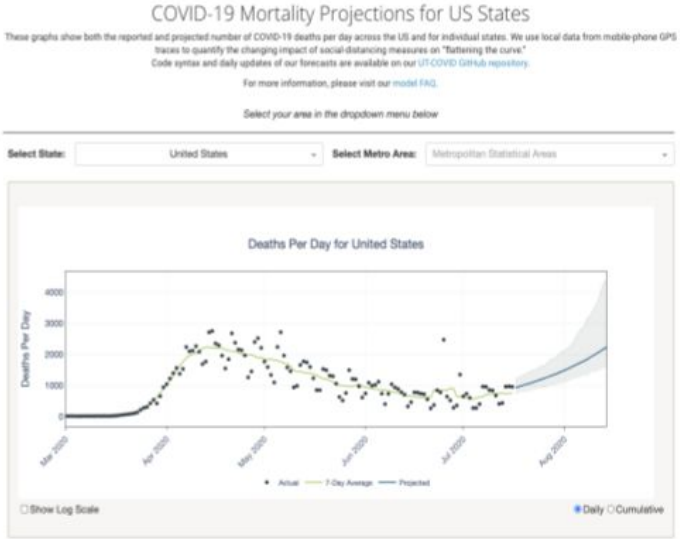
- **Christopher I. G. Lanclos** - MVSU

Mentors:
Joon Yee Chuah and Brandi Kuritz

Challenge: Create a visualization pipeline for a public data set

- Data visualizations are 🔥 right now
- Many are derived from public data sets, updated daily
- Some visualizations are made using Plot.ly Dash - a web-facing visualization tool that only requires Python

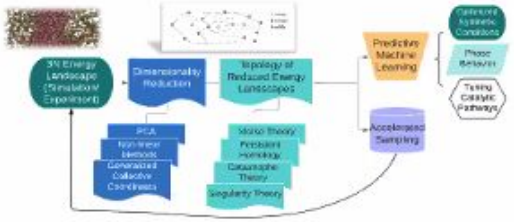
Scientists need a process to <u>continuously</u> **retrieve**, **process** and **publish** data that is *repeatable* and *resilient*

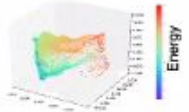


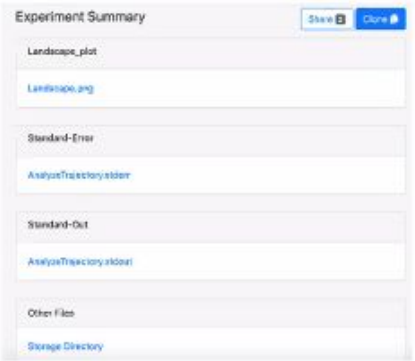
Interactive Visualization and Django Plugin Development for DELTA Project

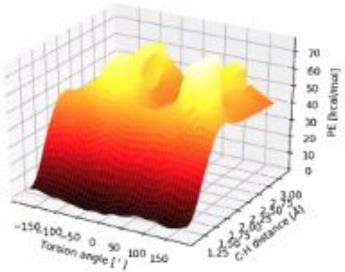
Data Science ✦ Topology = Chemistry

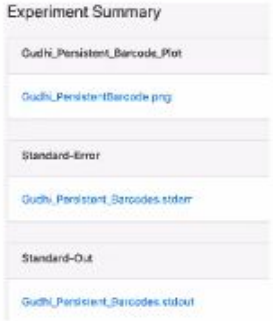
Mentor:
Sudhakar Pamidighantam

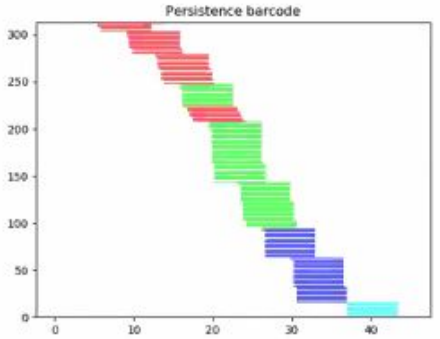








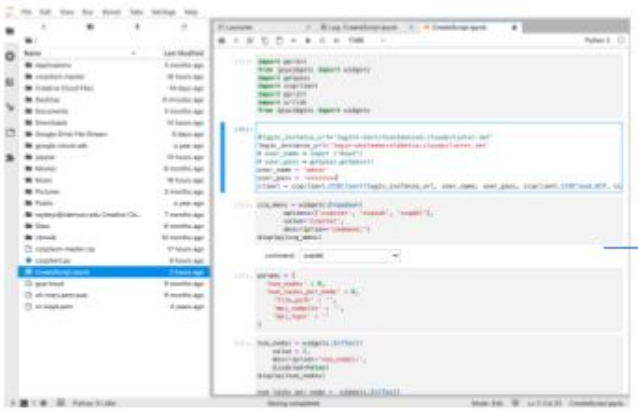


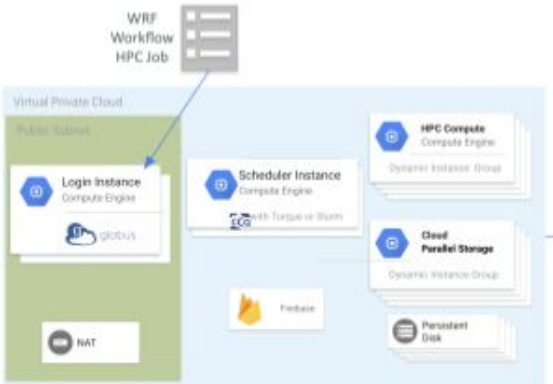


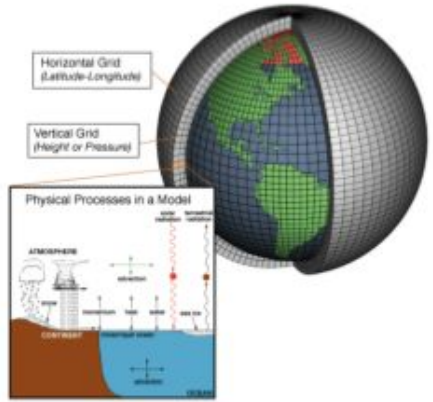
Delta-topology.org

JupyterLab and CloudyCluster on GCP (boyd + others)

Making a fancy jupyter notebook (jn) to submit general jobs
Or
Make a job that modifies parameters for WRF jobs







Or Jn to do other things in parallel if you have a good idea.
We have a basic Jn to start with that interacts with CloudyCluster job submission and mgt via ccqclient.py .

Google Cloud cloudy cluster intel

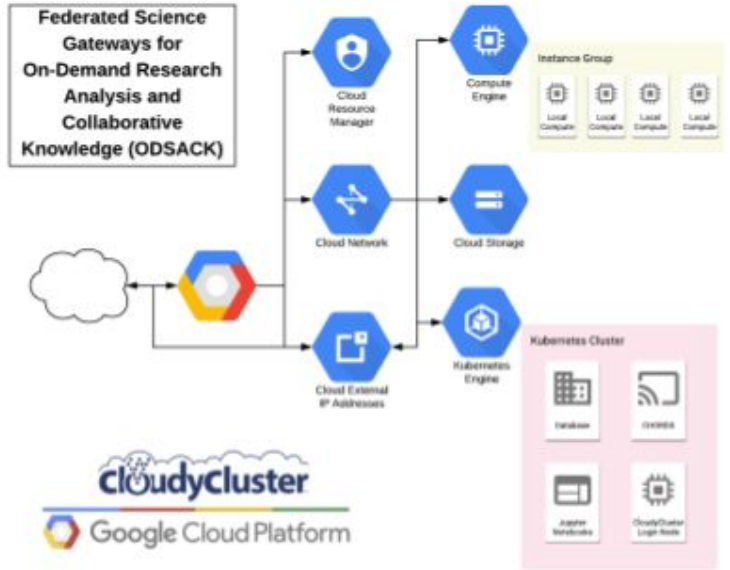
Cloudify Gateways: Federated Science Gateway for On-Demand Research Analysis and Collaborative Knowledge (ODSACK)

Principle Investigator:

Je'aime Powell

Texas Advanced Computing Center

The purpose of the ODSACK project is to test and develop a framework with a base set of software tools and configurations for small-scope research team requirements. The project will target several commonly implemented services including open authentication, collaborative coding with version control, data streaming to a database, visual dashboarding, and code-derived job submission to a computational cluster.



Supporting Specialists

- **Agbeli Ameko (UCAR)**

- **Christopher Lanclos (MVSU)**

- **Mona Wong-Barnum (SDSC)**

Presenter: Je'aime Powell

Deliverables

Posted to Slack PEARC20-General Channel before Presentations

Due Wednesday 7/29 by 6:00p(EST)/5:00p(CT)/3:00p(PT)

**If not posted 20pt automatic deduction from final judging score.*

Github Repository Link Posted to Slack #PEARC20-General Channel

- Source code
  - Including Comments
- PDF of presentation
  - Team members with pictures
  - Github Link
- README.md project description

Available Resources

- Google Compute Platform Credits
- CloudyCluster Access

Communications Channel

Slack Channel:
https://cloudhpchack.slack.com

Twitter:
@ccloudhack

Website:
http://hackhpc.org

Questions & Concerns

- Code of Ethics: https://sciencegateways.org/engage/hackathon/hackathon-code-of-conduct
- Hack HPC Site: http://hackhpc.org
- PEARC20 HackHPC Site: https://jeaimehp.github.io/HackHPC-Pearc20
- PEARC20 Conference Site: https://pearc.acm.org/pearc20/
- PEARC20 Zoom Session Links (Hackathon): https://www.brella.io
- SGCI URL: http://sciencegateways.org/engage/hackathon

The Hackathon Begins Next Week!

Monday July 27th @
1:00p(EST) / 12:00p(CT) / 10:00a(PT)

For more information join our Slack Channel:

https://cloudhpchack.slack.com/