HPC in the City: Pandemics

SC23
Denver, CO | i am hpc.

Mentor Overview

Pre-Event Training - October 27, 2023

HackHPC
Hackathons and Codeathons

HTTPS://HACKHPC.GITHUB.IO/HPCINTHECITY23

The University of Texas at Austin
Center for Pandemic Decision Science

STAR PARTNERSHIP PROGRAM

TACC TEXAS ADVANCED COMPUTING CENTER

Omnibond
Engineering ▪ Trust ▪ Identity

VOLTRON DATA

SGX3
Extend. Expand. Exemplify.

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Introductions:Icebreaker

Charlie Dey (TACC)

Je'aime Powell (TACC)

AGENDA

1. **Hackathon Objectives**
2. **Who are the Participants?**
3. **Project Timeline**
4. **Deliverables and Resources**
5. **Mentoring Information**
6. **Mentor Hack**

Join our Discord Server
https://discord.gg/G2a7JWnQkP

Hackathon Objectives and Student Outcomes

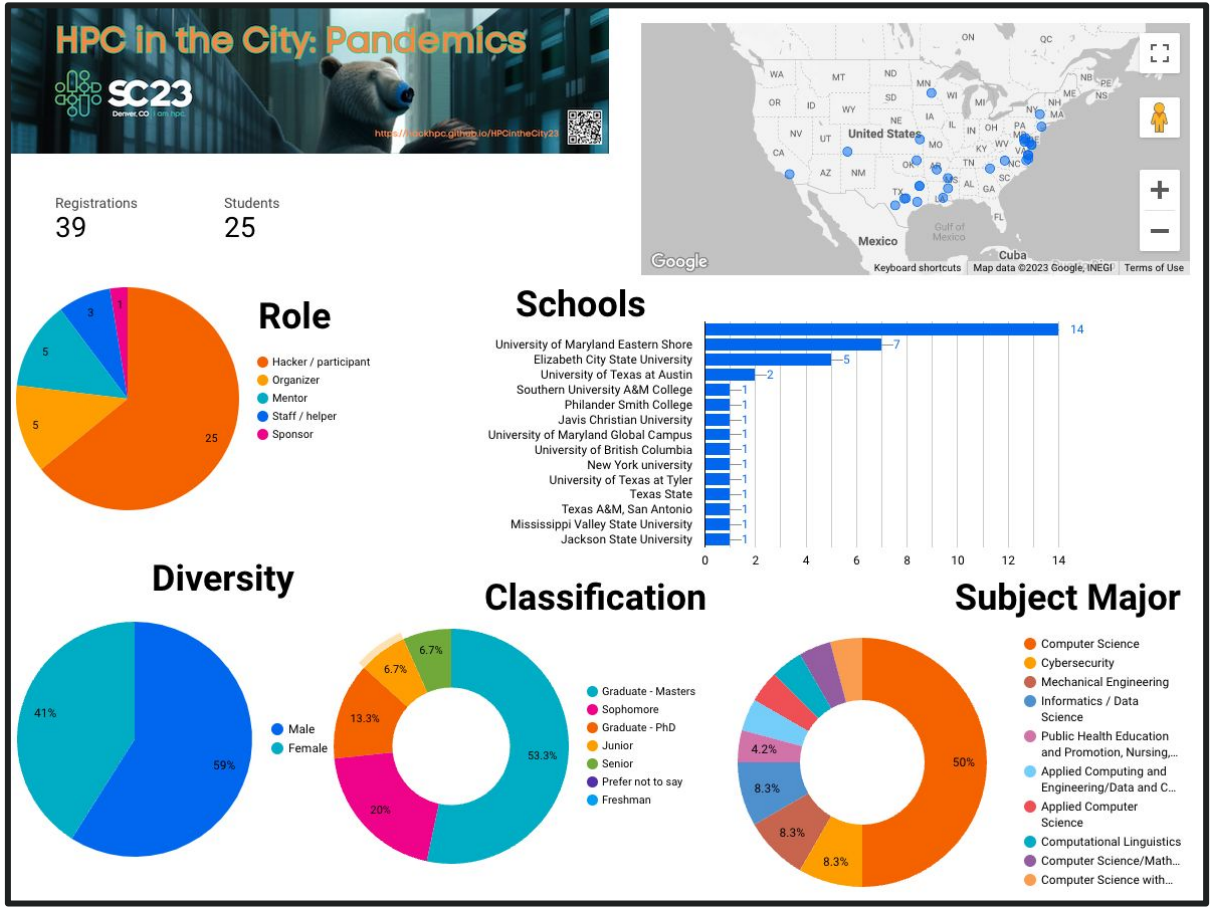
The hackathon aims to harness the resources, skills, and knowledge found in the HPC community in an effort to provide applied exposure towards students from 2-4 year post-secondary educational institutions. In short, the hackathon will provide HPC skills and training while targeting problems that directly affect the participants.

Develop knowledge and create solutions to identified pandemic decision science projects through application of data analysis/presentation or management utilizing HPC/CI resources.

Student Outcomes

- Increased familiarity with data science in the cloud
- Experience collaborative software engineering
- Develop professional communication skills

Who are the Participants?



Project Timeline

Event Simplified Schedule

- **Friday, 11/3/23**
  - **Kick-Off**
    - *Mentor Pitches* & Team Formation
- **Saturday, 11/4/23**
  - Morning Checkin - Team Introductions
  - Afternoon Checkin - Team Goals and Project Plan
- **Sunday, 11/5/23**
  - Afternoon Checkin - One-Day Progress
- **Monday, 11/6/23**
  - Afternoon Checkin - Team Status
- **Tuesday, 11/7/23**
  - Morning Checkin - *Mentor Trailers*
  - **Final Presentations**

~ 96 hrs Total Time
- ~7 hrs Planning / Checkins
- ~30 hrs Sleep/Rest
~59 hrs Work Time

Project Deliverables and Resources

Deliverables:

- Github Repository
  - README.md with project description
  - Source code Including Comments
  - Presentation
    - Team members with pictures
    - Use of technology in the project
    - Project impact to the community

Resources:

- Project Eureka
- Mobility Dataset (TACC)
- Commonly Used:
  - Python
  - Jupyter Notebooks
  - Node.Js (JavaScript)
  - Repl.it (Collaborative Environment)
  - HTML\CSS
- Discord - https://discord.gg/G2a7JWnQkP

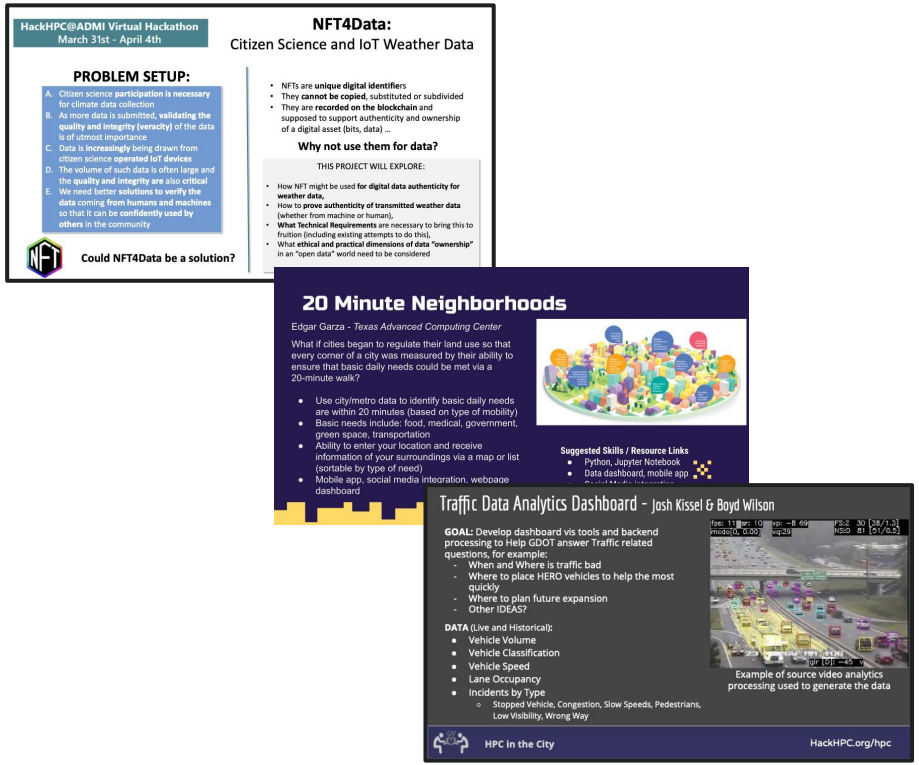
Mentor Deliverable: Pitch Slide

Due Friday 11/3/23 Kick-Off:

A slide deck link will be provided

- 2 slides / 2 minutes
- Include:
  - Your name and Affiliation
  - Suggested Project/Idea Title
  - General Pitch
  - Possible suggested skills / resources

Tip: Keep it simple. Think elevator pitch!

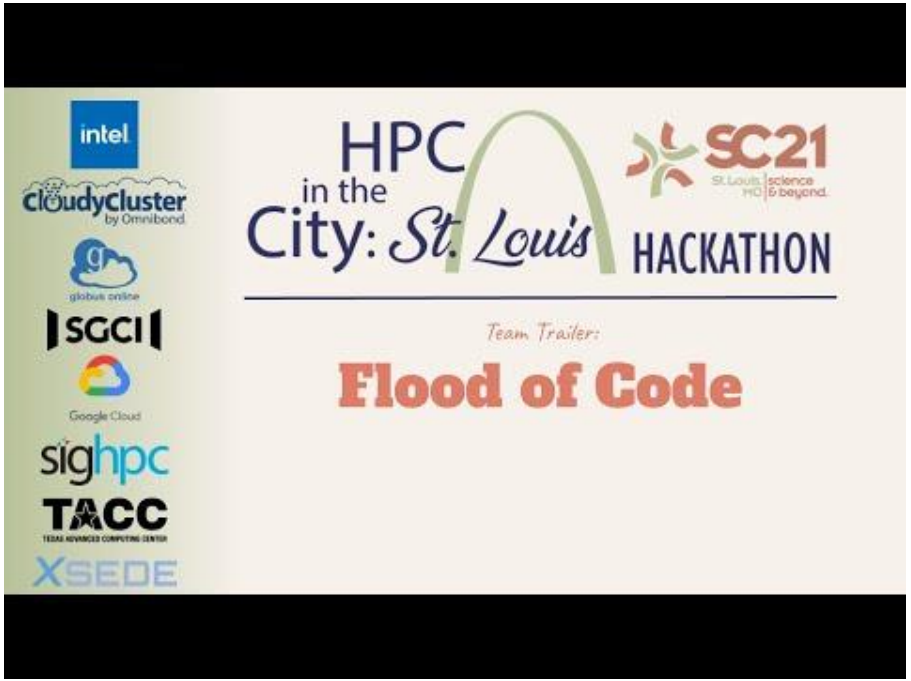


Mentor Deliverable: Team Trailer

Due Monday 11/6/23 Afternoon Checkin

- No more than 1.5 minutes long
- Include Team Goal
- Team Members
- No licensed music (the videos are going on YouTube and can be striked)

Tip: Keep it simple. View this as a gift from the Mentors and Co-mentors to your respective groups.

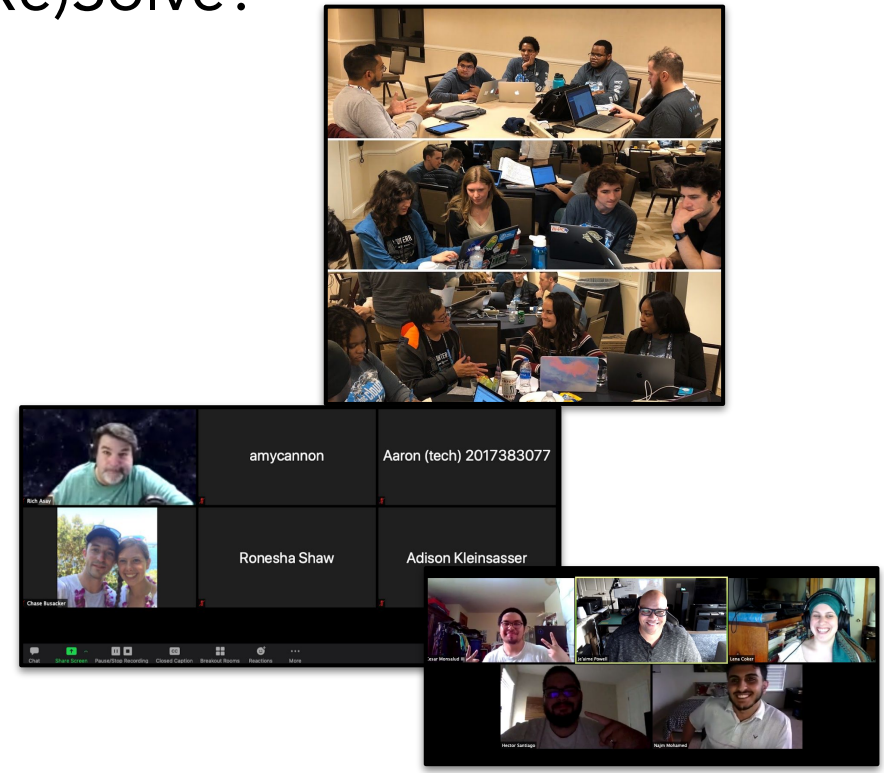


What Can You Expect as a Mentor?

- Your mentoring will be iterative
- 50% - 70% of your team's efforts **will** be spent formatting the dataset before you can use it 😱
- Your students will experience challenges, and so will you as a mentor (Tears can and have happened, 😳)
- You can't solve everything in 30 hours! (*No really you CAN NOT!!!*)

What Challenges Do Mentors (Re)Solve?

- Imbalance in participation
- Project direction isn't viable
- Students are reluctant to drive the process
- Students just want the answers
- Morale decreases over time
- Students do not communicate



Fundamental Principles of Mentoring

- Observe the students, not the work.
- Be present, but not omnipresent.
- Use critical questions, not criticisms.
- Be sure both you and the students take breaks and rest.

Your Task Today

Choose a "*Common Mentor Challenge*", and describe a strategy you will use to address it

- What is the problem?
- What technique are you going to develop or use to tackle the problem? (one sentence)
- Tell a story of ideally, how you think this will play out
- Collaborate and report out, with a presentation visual

Example Technique

Problem: How do you get feedback from your students, when they might be reluctant to criticize the type of help you've given them?

Answer: Like, Wish, Wonder!

Describe: Students write a short one sentence reflection about their learning experience, where they describe something they liked, something they wished, something they wondered. They will take turns sharing. All students participate. In doing so, students are given an opportunity to prepare an answer rather than being "put on the spot", and any deltas come are reframed as "further questions" rather than frustrations

Mentor Mini-HACK
(7 minutes)

Task:

From the "Common *Issues when Mentoring*" box pick one problem as a group and develop a technique to resolve it.

Deliverable:

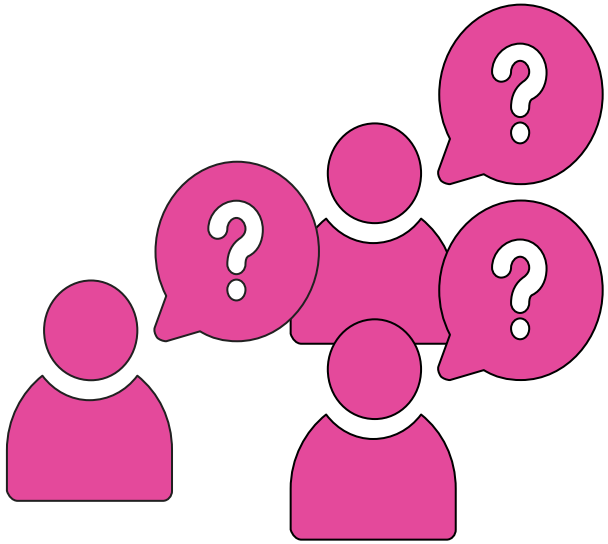
One (1) slide and present the developed technique in one (1) minute.

Common Issues when Mentoring:

- ❏ Imbalance in participation
- ❏ Project direction isn't viable
- ❏ Students are reluctant to drive the process
- ❏ Students just want the answers
- ❏ Morale decreases over time
- ❏ Students do not communicate

Mentoring Techniques - Did you notice?

- ➔ Getting to know your participants
- ➔ Project purpose/goals
- ➔ Gamification
- ➔ Scoping the project
- ➔ Student guidance/counseling
- ➔ Student project roles and responsibilities
- ➔ Adjusting to student skill levels
- ➔ Critical questioning



Like, Wish Wonder this Training!

Now to guide you through a post hack reflection using the “Like, Wish, Wonder” technique.

Each person gives:

1 - Like & 1 - Wish and/or Wonder

Audience if you agree, give the “snaps” or 👍

QUESTIONS ??

Next Sessions:

- **TACC On-Boarding and Dataset Access**
  [Wednesday, 11/1/23 @ 5pm CDT]

- **Kick-Off**
  [Friday, *11/3/23 @ 5pm CDT*]

Schedule:

https://hackhpc.github.io/hpcinthecity23/schedule.html

Presenter Contact Information:

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