



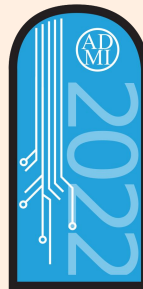
HackHPC@ADMI22 | Training Session



Extreme Science and Engineering
Discovery Environment



Science Gateways
Community Institute



**HackHPC@
ADMI**

High Performance Computing
and Gateways 2022 Symposium
www.admiusa.org



Join the
HackHPC@ADMI22
Discord using this
QR Code!

GitHUB and Discord

<https://hackhpc.github.io/ADMI22/>



HackHPC@ADMI22 | Training Session



XSEDE

Extreme Science and Engineering
Discovery Environment

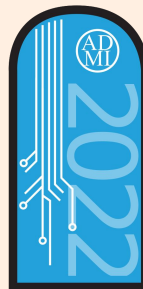


TACC

TEXAS ADVANCED COMPUTING CENTER



Science Gateways
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Agenda

1. Introductions
2. Hackathon Objective
3. Deliverables and Resources
4. General Information
5. Discord Basics
6. GitHub (Web) Basics



Organizers



Linda Hayden - *ECSU/SGCI*
haydenl@mindspring.com



Amy Cannon - *Omnibond*
amycannon@omnibond.com



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



Boyd Wilson - *Omnibond*
boyd@omnibond.com



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



John Holly - *XSEDE*
jholly@sura.org

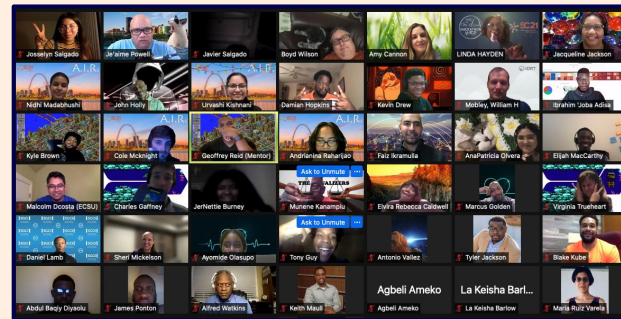
The Objective of HackHPC@ADMI

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 about solutions to identified issues affecting St. Louis through application of data analysis/presentation or management.

Student Outcomes

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



Student Deliverables and Resources

Deliverables:

- Source code Including Comments
- PDF of presentation
 - Team members with pictures
 - Use of HPC technology in the project
- Github Repository Link
 - README.md with project description

Resources:

- Google Cloud (Provided Credits)
- Cloudy Cluster
- Most Commonly Used
 - Python
 - Jupyter Notebooks
 - Node.js (JavaScript)
 - Repl.it (Collaborative Environment)
 - HTML
- Discord - <https://discord.gg/ARq3vwWafF>



General Information (the 3 T's)

- **Teams**

- 4-5 Students
- 1 Primary Mentor
- 1 Technical Mentor

- **Time**

- March 31st - April 4th
 - 3/31 @~7pm ET Event Start
 - "The Draft"
 - 4/[1-4] @ 11am ET & 7pm ET- Checkins
 - 4/4@6pm ET-Final Presentations

- **Topic Examples**

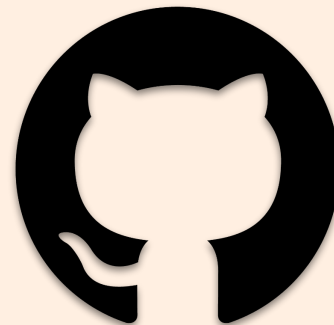
- Data Analysis of COVID 19
- Economic disparities and their effects on college participation
- Genomics, Molecular Dynamics, or Weather Modeling in the Cloud.
- Social Justice
- AI-based Crowd Status
- Public Data Management
- Graduation Rates
- Broadband Access
- Insurance vs. Public Health Resilience



Communication Platforms



DISCORD



GitHub

<https://hackhpc.github.io/ADMI22/>



Discord - Basics

HackHPC Discord Server:

<https://discord.gg/ARq3vwWafF>

Functions:

- Messages
 - Direct and Group
- Video Conference
 - Screen Share
- File Exchange



Join the
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Discord using
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Discord Channels and Tips

Important Channels

1. #general
2. #assistance (voice channel)
3. HackHQ-general (voice channel)
4. Custom team channel

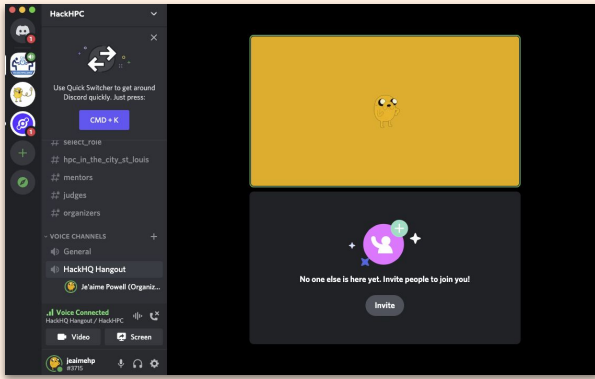
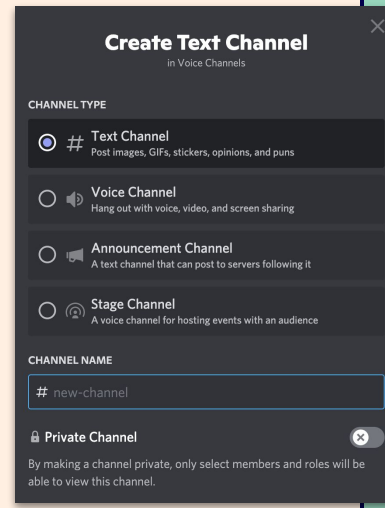
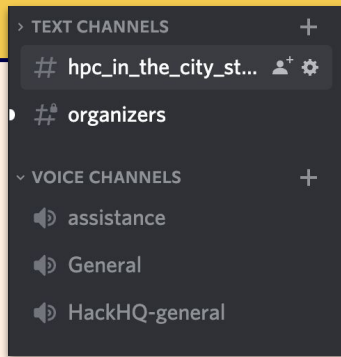
Tips

1. Browse for a channel
2. Create Group
3. Conference

1.

2.

3.



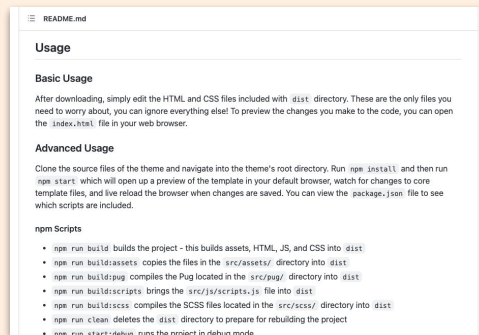
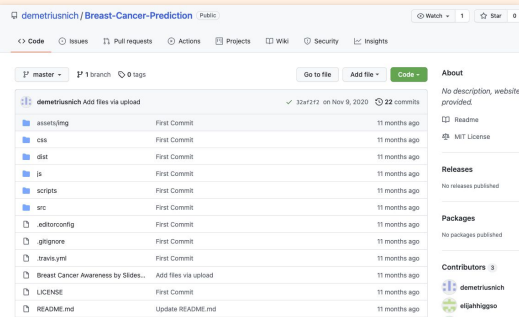


GitHub (Web) - Basics



Note: A GitHub repository will be required of all teams when reporting out during final presentations. (Examples <http://hackhpc.org/pasthacks/>)

[HINT] [GitHub Pages](#) is a powerful, free feature!



Breast-Cancer-Prediction

Breast Cancer Prediction Website

HEAD According to Georgia Department of Public Health and the Georgia Center for Cancer Statistics, breast cancer is the leading cause of cancer incidence in women citizens residing in Georgia. Breast cancer accounts for 30% of all new cancers found in women. Through prediction modelling, women can understand how risk factors play a part in prevention. Knowing these risks brings awareness and awareness brings about prevention

We created a website with prediction graphs showing the possible cases of breast cancer for 2020, and compared it to prior years.

This site was created to spread awareness for breast cancer in Atlanta.

You can see what work was done on Google Colab <https://colab.research.google.com/drive/7N89pY4MSITOUgUvqSta7wfQ1yUzyV-i7usp#sharing>

This project was created by Demetrius Nicholson, Rayna Wynn, Elijah Higgs, Javier Guillen, and Tony Guy.

Data for this study was obtained from the BCSC: <http://bcsc-research.org/>.

Start Bootstrap - Grayscale

Grayscale is a multipurpose, one page HTML theme for Bootstrap created by Start Bootstrap.

Preview



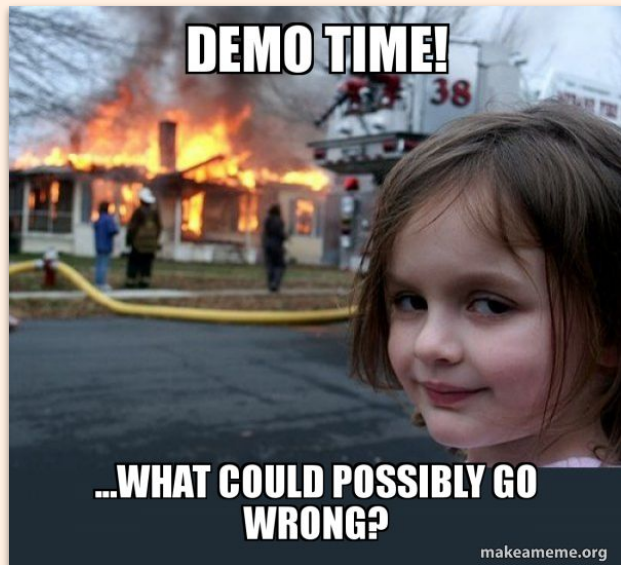
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Repository Creation and README.md

Demo Time!!

Example GitHub Repo:

<https://github.com/jeaimehp/Git-Intro>



<https://hackhpc.github.io/ADMI22/>

Questions and Concerns

Next Training Sessions:

- **Hackathon Beginning to End** - [6/25/22]
- **Data to Dashboard** - [6/26/22]
- **Google / CloudyCluster** - [6/26/22]

Schedule:

<https://hackhpc.github.io/ADMI22/schedule.html>

Presenters Contact Information:

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

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