



FACULTY HACK @GATEWAYS 23

Day 2 The Empire Strikes Hack

[HTTPS://HACKHPC.GITHUB.IO/FACULTYHACK-GATEWAYS23](https://hackhpc.github.io/facultyhack-gateways23)



VOLTRON DATA





SCHEDULE

<https://hackhpc.github.io/facultyhack-gateways23/schedule.html>



The Hack.

- ~~• 10/19, 5pm ET - Kickoff~~
 - ~~• Project Eureka! - Boyd Wilson, CEO, Omnibond~~
- 10/20, 5pm ET - First Check-In
- 10/21, 5pm ET - Second Check-In
- 10/22, 5pm ET - Final Check-In
 - Faculty Programs - Elijah Macarthy, ORNL

Poster Presentation.

- 10/30, 6:40pm ET - Science Gateways 23
 - Exit Interview, Alex Nolte



DELIVERABLES

Deliverables:

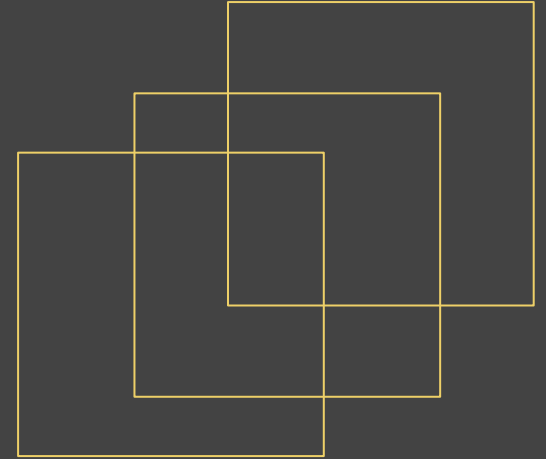
- A curriculum for a new or modified course
- A github repository, including all of your presentations, team information, your final poster
- A poster to present at Gateways 23 conference in Pittsburgh PA

Outcomes:

- A completely revised course description with implementation schedule.
- Assignment of a Gateways community mentor to provide use cases, resources and next step suggestions.
- Robust access to HPC resources for research and instruction.
- Opportunities to collaborate with other HPC educators and technical personnel.
- Understanding of how to collaborate with an educator at their institution on HPC course revisions.

Challenges:

- Attending all Hackathon training sessions For updates see <https://hackhpc.github.io/facultyhack-gateways23/>
- Attend the Gateways 2023 Conference in Pittsburg, PA (\$2000 Travel stipend is provided- make your own travel arrangements)
- Poster presentation of revised courses at Gateways 2023. Poster Session is Monday Oct. 30th 6:40: PM - 9:00: PM EST
- Produce a Blog Post on your SGX3 Curriculum project which will be uploaded to sciencegateways.org/networking-community/blogs

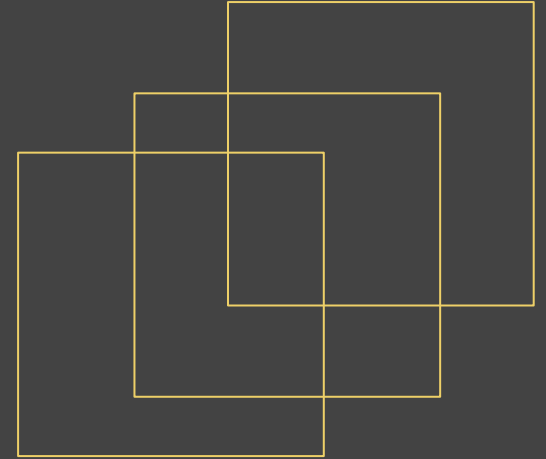




YOUR GITHUB REPO

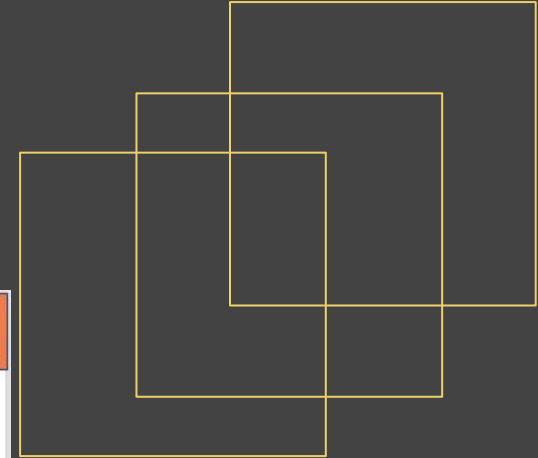
Your GitHub should contain the following:

- Contact information for the faculty and the mentor
- A headshots of the faculty and the mentor
- HPC support / accounts for your course (include URL and a brief description)
- A List of 3-4 Gateway references (include the URL of the Gateway and a brief description)
- A List of HPC tools used (include URL of tutorials or training)
- The revised course syllabus
- The next step suggestions from the community mentor
- The 2-year Course implementation schedule (Spring 2024 - Fall 2025)
- Your Poster, which conforms to the template provided
- The 2-page blog post (Include specific HPC resources and Gateways usage).
- Description of your ongoing needs from SGX3.





YOUR POSTER



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Revised Course Description

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Sample HPC/Gateways Exercise

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Gateway Community Mentor Syllabus Suggestions

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Implementation Schedule

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Resource Needs/List

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Resources / Science Gateways

- Resource
- Resource
- Resource
- Resource
- Resource

Possible Expansions

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Use Cases

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Authors

Author 1 Photo	Author 1 Name Affiliation Email
Author 2 Photo	Author 2 Name Affiliation Email
Author 2 Photo	HPC/Gateways Mentor Name Affiliation Email

Your feedback is welcome!

MORE INFORMATION → <https://hackhpc.github.io/facultyhack-gateways23>



FACULTY HACK @GATEWAYS 23

Cloudy Cluster!

Presented by: Boyd Wilson
CEO - Omnibond Systems

[HTTPS://HACKHPC.GITHUB.IO/FACULTYHACK-GATEWAYS23](https://hackhpc.github.io/facultyhack-gateways23)

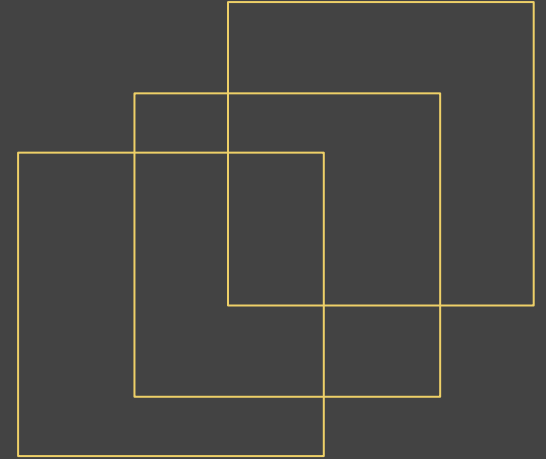


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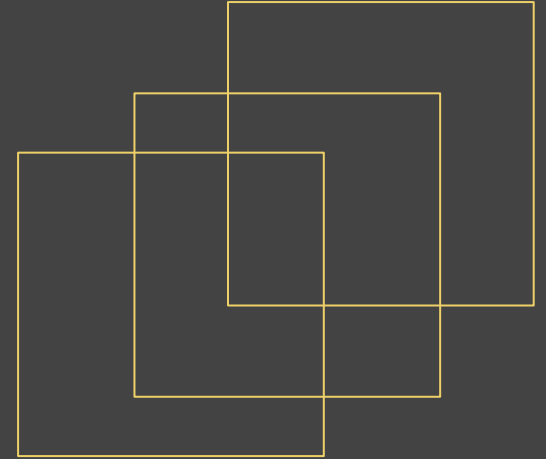
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CHECK-IN PRESENTATION TIME





FACULTY HACK @GATEWAYS 23

Team Introductions & Goals

[HTTPS://HACKHPC.GITHUB.IO/FACULTYHACK-GATEWAYS23](https://hackhpc.github.io/facultyhack-gateways23)





Instructions

1. Create a slide
2. Add your team information to the slide
 - a. Team Members names and Pictures
 - b. Team Mentors names and Pictures
 - c. Team Theme Song
 - i. Song name
 - ii. Artist
 - iii. URL Link to the song
 - d. Your Goals
 - e. Url to your team GitHub repository



Team Altair

Bernie Boscoe, Southern Oregon University

Team Mentors : Veronica Vergara & Mohamed Elbakary

Team Theme Song: New Order, Thieves like us remix (1987)

<https://soundcloud.com/markaymufc/new-order-thieves-like-us-mk-instrumental-cover-kleptomaniac-mix>

Goals:

To add a module to an undergraduate Intro to Data Science course that demonstrates how to use Jupyter Notebooks in the cloud, with a large dataset, and if I can, GPUs to train an ML model that would not be possible to do without a GPU-enabled device. Outcomes would be an understanding of accessing cloud interfaces, basic terminal commands, an overview of the Jupyter notebook as both a local and cloud tool, and if possible, how to test if GPUs are being seen. Update: possibly using JetStream2

What I need help with: what resources have Jupyter notebooks with GPU option? How can we all share a space, for example for 25 students? How do I handle accounts? How can we load/make available a dataset for them to access?

<https://github.com/bboscoe/gateways23>





Jarvis Bulldog Team

Team Members: Widodo Samyono,
Jarvis Christian University



Team Mentors: Je'aime Powell



Team Theme Song

- i. Song name : Hey Bulldog
- ii. Artist : The Beatles
- iii. URL Link to the song: <https://www.youtube.com/watch?v=M4vbJQ-MrKo>



Jarvis Bulldog Team

Our Goals:

- 1) Redesigning MATH 3390: Computational and Mathematical Biology, using HPC Open Sources from Science Gateways.
- 2) Building a website for MATH 3390: Computational and Mathematical Biology, using the HPC Open Sources.
- 3) Piloting the redesigned course in Spring 2024.
- 4) Conducting surveys and evaluations for the course.

Url to our team GitHub repository:

<https://github.com/wsamyono/BulldogTeamFacHackGA23>

Team Tech Tigers



TEAM TECH TIGERS

Not Pictured
Fernanda Foerter
Voltron Data

Alfred Watkins
Department Chair
Computer Science
Department
Morehouse
College
BS Morehouse
College
BEE & PhD
Georgia Institute
of Technology



Jacqueline Jackson
Interim Chair
Department of
Electrical & Computer
Engineering and
Computer Science
Jackson State University
BS Computer Science
Jackson State University
MS & PhD Computer
Science – Auburn
University



Andrew Overton
Adjunct Professor
Department of
Electrical &
Computer
Engineering and
Computer
Science
Jackson State
University
BS & MS Computer
Science – Jackson
State University



 Team Song: Weird Science by Oingo Boingo



Team Theme Song

- i. Song name : Weird Science
- ii. Artist : Oingo Boingo
- iii. URL Link to the song:

https://soundcloud.com/oingo-boingo-official/weird-science-album-version?si=e08c2d1f6ce54be18aa649d1ea08556c&utm_source=clipboard&utm_medium=text&utm_campaign=social_sharing



Team Tech Tigers

Target Course:

ECE 101 - Introduction to Electrical & Computer Engineering

Our goals:

- Expand the Introduction to Computers Module to include an introduction to High Performance Computing
- Introduce students to cloud services including GitHub and AWS
- Expand students' understanding of the need for HPC professionals

Url to our team GitHub repository:

<https://github.com/jackson820/TeamTechTigers>



Bulldogs Team



Team Member: Dr. Rui Zhu
(Kettering University)



Mentor: Dr. John Holmen
(Oak Ridge National Laboratory)



Mentor: Yvonne Phillips
(Morehouse College)

- Target Course(s): CS425 Parallel Programming and Algorithms, CS457 Wireless and Mobile Security
- Goal:
 - Integrating HPC with Cybersecurity, Cryptography, and Machine Learning to develop curriculums
 - Identify applicable HPC resources from ORNL/wider HPC community and develop course descriptions
 - Create and refine course schedules, hands-on labs, etc.
- GitHub Repo: <https://github.com/ruikobe/KetteringTeamFacHack23>
- Theme Song: [George Thorogood & The Destroyers - Bad To The Bone](#)



WorkFlow Labs in HPC CAMSA Team

Something that always work (Reproducibility)

CAMSA FACULTY-HACK

- Goals:
1. Integrating HPC within CSCI 5306 (Computer Networks) Workflows lab
 2. Produce introductory material to all other majors

Ballad of the Alamo, R.W. Hampton, <https://soundcloud.com/r-w-hampton/ballad-of-the-alamo?in=user-470687170/sets/normal>

https://github.com/alsmadi/CAMSA_Gateways_2023

Team Name: **ThreatTracker**

Computing Tools/Environment

- GitHub (to store code and data) (optional)
- Python 3.8+ with packages (faker)
- Oasis stix2-generator, stix2-validator, stix-visualizer
- Synthetic Data Vault
- MITRE ATT&CK STIX Data

Skills/Knowledge/Abilities

- Python
- Statistics
- Databases
- Basic cyber intrusion knowledge

Course Assessment

- 25% of the overall grade: Create frontend for Identity, Malware, and Threat Actor objects
- 25% of the overall grade: Generate STIX objects from user input, Finish STIX objects and store them in the database
- 25% of the overall grade: Generate/visualize a graph using three STIX objects Identity, Malware, and Threat Actor
- 25% of the overall grade: Anomaly detection using Deep Learning Algorithms.

Theme Song:

<https://soundcloud.com/alslyn/synesthesia?in=sc-playlists/sets/brainwaves>





TIME TO HACK.

We're going to be opening breakout rooms very soon

- Your task for tomorrow's check-in is:
 - The Course Description
 - Potential Resource Needs
 - Sample Datasets
- And be ready to present, 3 minutes, 3 slides.



Supported by:



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What's coming up tomorrow

10/21, 5pm ET The Second Check-In

Except for Je'aime:

