

# AI+Science Hackathon 2024

Eric and Wendy Schmidt AI-Postdoctoral Fellowship  
A Schmidt Sciences Program  
Data Science Institute University of Chicago

May 6th – May 9th 2024



# Welcome to the AI+Science Hackathon!

- ▶ exciting new ideas
- ▶ transfer models to new areas
- ▶ compete for a trophy
- ▶ 2 projects

## Unlock the Secrets of Molecules with AI

- ▶ 7 teams

## The Lives & Deaths of Stellar Binaries

- ▶ 6 teams



## Organizing Team

# Computational Environment

- ▶ 2 project specific introductions
- ▶ resources on RCC Midway3
- ▶ 8 dedicated Nvidia A100 GPUs
  - ▶ schmidt-gpu
- ▶ group storage

/project/dfreedman/hackathon/XXX



This is not the final GitHub URL

The screenshot shows a GitHub repository page for 'UChicago-AI-in-Science-Hackathon'. The repository has 20 commits and 1 fork. It includes files like 'molecular\_project', 'slides', and 'stellar-paleontology'. The README file contains a guide titled 'Getting Started with Midway3'.

UChicago-AI-in-Science-Hackathon Public

Watch Fork Star

Code

About

No description, website, or topics provided.

Activity

0 stars

1 watching

1 fork

Report repository

Releases

No releases published Create a new release

Packages

No packages published Publish your first package

Contributors

InnocentBug Ludwig Schn...  
badeaA  
Colm Talbot Colm Talbot  
badeaa3

Languages

Getting Started with Midway3

This guide is designed to help you quickly start using the Midway3 system and the hardware provided for this event.

# Teams Selection & Mentors

## Stars Mentors

- ▶ Colm Talbot

## Slack Space for Communication

[https://join.slack.com/t/aisciencehack-qop3836/shared\\_invite/zt-2hx2lpvtf-coICNHwTFARxgFDYfwnvRw](https://join.slack.com/t/aisciencehack-qop3836/shared_invite/zt-2hx2lpvtf-coICNHwTFARxgFDYfwnvRw)



## Molecular Mentors

- ▶ Ludwig Schneider

## Spread Sheet for Teams

[https://docs.google.com/spreadsheets/d/1QbVzL1gxW0LiaMQ5dpUCMQXtT\\_bGgAvIDExyWpC9UM4/](https://docs.google.com/spreadsheets/d/1QbVzL1gxW0LiaMQ5dpUCMQXtT_bGgAvIDExyWpC9UM4/)



# Day 1: Excitement

- ▶ get to know each other
- ▶ get to know your mentor
- ▶ brain storm model ideas
- ▶ pick a tech stack
- ▶ build a data pipeline



## Day 2: Valley of Despair

- ▶ your first ideas didn't work
- ▶ the excitement is wearing off
- ▶ brain storm and select most promising idea
- ▶ iterate and build new models
- ▶ train new models over night



# Day 3: Seeing the Light

- ▶ your models worked over night!
- ▶ you can actually see how you solve this!
- ▶ iterate on your models
- ▶ optimize your hyper parameters
- ▶ finalize your models

## Evening

- ▶ receive final evaluation data @ 5PM
- ▶ prepare your presentation



# Day 4: Bringing it over the Finish Line

- ▶ gather results for last night
- ▶ present us your success and hiccups
- ▶ you have 7 minutes per team
- ▶ 2 minutes for questions

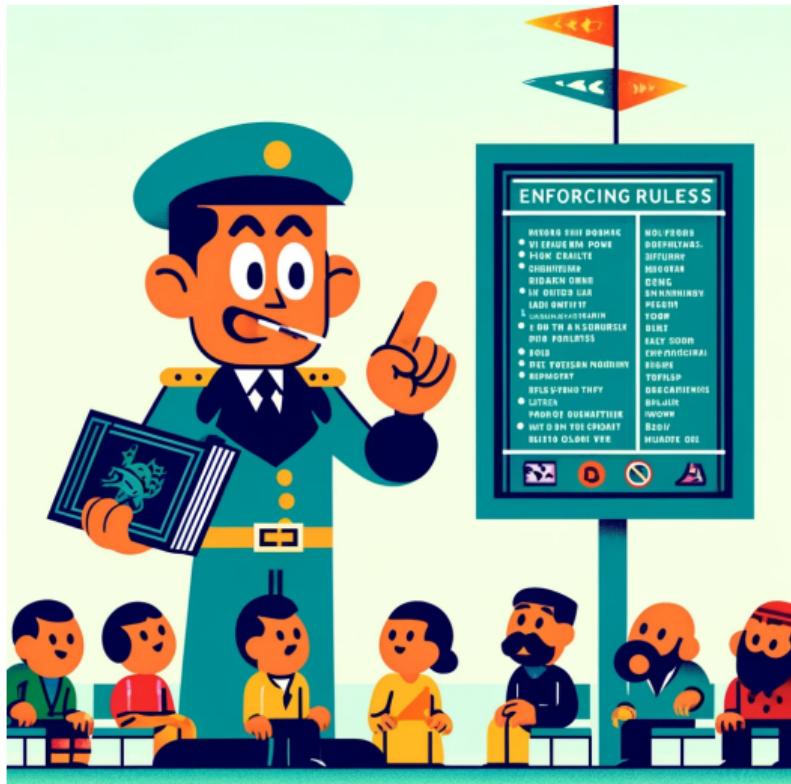
## Deadline

Presentation must be submitted 9AM May 9th



# Rules for the Hackathon

- ▶ play fair!
- ▶ only use data provided in your challenge
- ▶ do not use other groups results
- ▶ use only the computation time you need
- ▶ do not use more presentation time as everyone else
- ▶ discuss publication with mentor and project mentor



# Happy Hacking!

Unlock the Secrets of Molecules with AI

The Lives & Deaths of Stellar Binaries

► Room Stuart 104

► Room JCL 298