Spring 2025

# Codeathon Training

## 1-22-25 Session

SGX3
Extend. Expand. Exemplify.

# Deliverables

- Attend all virtual training events held Wednesday evenings 6pm – 8pm ET.

- Register for the 2025 ADMI Symposium (travel support provided)

- Complete the Bandit "War Games" units 25-33 on "UNIX command line scripting".

- Submit an application to the Summer 2025 REU program for Purdue's Anvil supercomputer. (*Closes Feb. 15th, 2025*)

- Create a GitHub repository with generated source code.

- Create and present a research poster of created project.

Links can be found on the SGX3 Codeathon Training 25 Event Site:
https://hackhpc.github.io/sgx3codeathontraining25/

# Communications

Discord:

https://discord.gg/p4N3MuAP
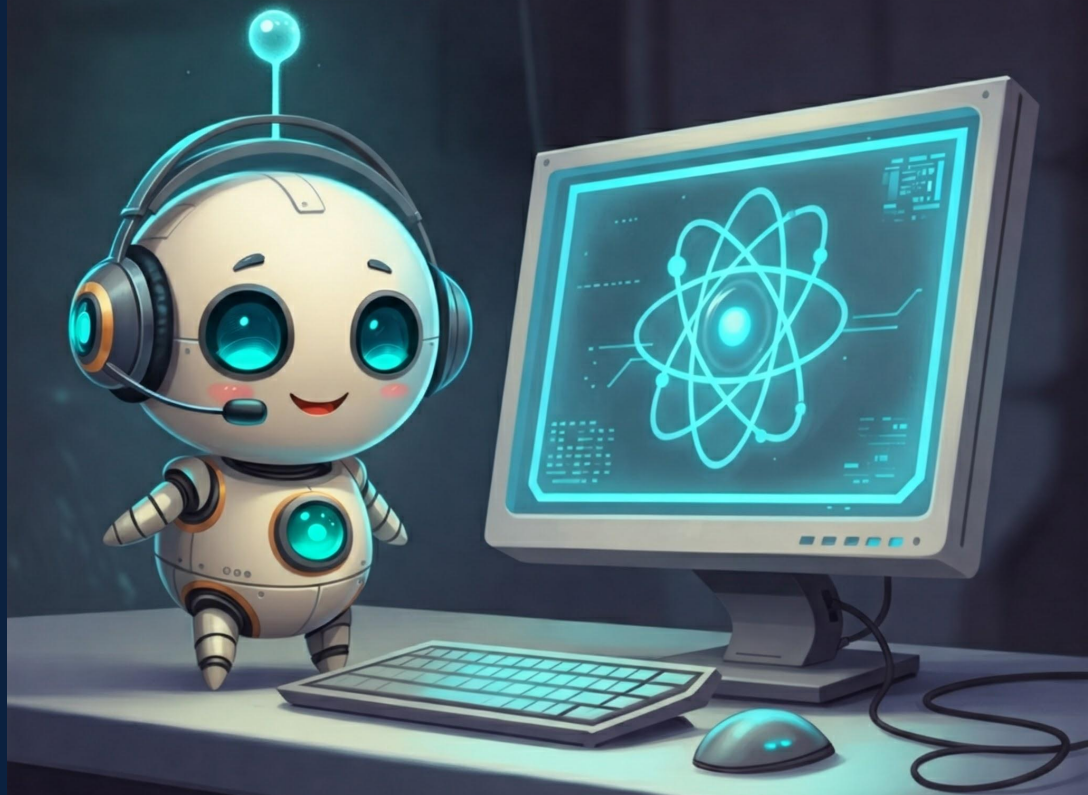
# The Project

**AI-Powered Science Gateway Assistant**

Develop an intelligent chatbot that helps researchers navigate and utilize various science gateway tools and resources. This project would combine natural language processing and machine learning to create a user-friendly interface for accessing complex scientific applications.

# AI-Powered Science Gateway Assistant

- Natural Language Processing: Employ NLP techniques to enable the chatbot to understand and interpret user queries effectively.

- Machine Learning: Integrate machine learning algorithms to allow the chatbot to learn and adapt to user behavior, improving its responses and recommendations over time.

- Science Gateway Integration: Connect the chatbot to various science gateway tools and resources, providing a centralized access point for researchers.

- User Interface Design: Develop an intuitive and user-friendly interface that facilitates seamless interaction between researchers and the chatbot.

- Knowledge Base: Create a comprehensive knowledge base of science gateway tools, resources, and research domains to enable the chatbot to provide accurate and relevant information.

# Method

- Pick a project as a group
- Break the project into tasks
- Break the tasks into skill sets
- Set leads for the skills sets to direct the tasks
- Select communication platform(s)
- Use AI as must as possible to do the coding for us



I LOVE IT WHEN

THE CONCEPT OF
A PLAN COMES TOGETHER

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Next Session:
1/29/25

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