

# NSF POSE Info Session

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Academic and industrial researchers worldwide are extensively using the open-source model to make research artifacts such as software, tools, and prototypes openly available with a goal of enabling collaboration and catalyzing further innovation

# OSP@GT Core Objectives – 2023-2025

## Build an OSS Ecosystem on Campus

### Establish an OSS Standard for GT

**Develop** and share best practices for open-source software development at the institute level via an OSS research hub.

**How to** create an open-source project.

**How to** choose a license.

**How to** develop an open source community.

### Training

**Create and support** a virtual summer internship experience targeted to introduce students to new open-source research projects and experiences

**Technical Training & Workshops**

### Sustainable OSS

**Build** the university's capacity to curate, manage and maintain open-source software throughout the software lifecycle

**e.g., Archival techniques** to preserve open-source software

## Outreach to Local Universities

# OSPO@GT Core Objectives – 2025-2027

## OSPO Goal 1: Support GT OSPO Sustainability

### Improve OSS Developer Engagement

**Create a welcoming community** for all developers and engage in robust community outreach

**Develop added metrics** to track OSPO progress and criteria for success

**Support Developers** at GT and other Atlanta universities through workshops, training sessions, and meet-ups

### Institutionalize Student Programs

**Evolove the virtual summer internship program** to be more sustainable and allow for more opportunity for all interested students

**Enhance and Improve** training materials to allow for more large-scale, asynchronous OSS training programs

### Address the AI Revolution

**Educate** students on the benefits and pitfalls of open-source AI and current viewpoints, including the ethical use of AI

**Host Open Data Sets** and exploration tools for AI data agents

**Provide training for AI hardware and software tools** on local HPC resources

**Design joint software engineering training** with other GT groups

### Explore GT Strengths in OSS

**Collaborate** with Georgia Tech's School of Cybersecurity and GTRI to develop and share secure open-source best practices.

**Support** institute efforts in maintaining research integrity using open-source techniques

## OSPO Goal 2: Support a Sustainable OSS Community for GT and Atlanta

# About Session

- NSF POSE's vision
- Target Applicants
- Submission Requirements
  - Phase I versus Phase II submissions
- OSPO Resources for POSE applicants
- Other possible sources for funding

Note that this presentation is meant to help supplement existing NSF resources. We strongly encourage you to review all NSF resources and solicitations as the definitive guide for proposals.

<https://new.nsf.gov/funding/opportunities/pathways-enable-open-source-ecosystems-pose>

# About NSF POSE (24-606)

- Call for Pathway to Enable Open-Source Ecosystems (POSE) proposal solicitation [[link](#)] (all pictures in this slides deck are from [this link](#))
- **Due 9/2/2025**
  - *Added call for Phase 1 due on 1/13/2026*
- Vision
  - Forming managing organizations
  - Ensuring a broader and diverse adoption of open-source products
  - Enabling collaboration and catalyzing further innovation
  - Focusing on technologies with broad societal impact
- OSEs must use a distributed development model (e.g., GitHub, GitLab)
- POSE program **does not**
  - Support development of open-source research products
    - Including new core features
  - Support development of a data repository with centralized development model
  - Support the development of products that are intended for profit

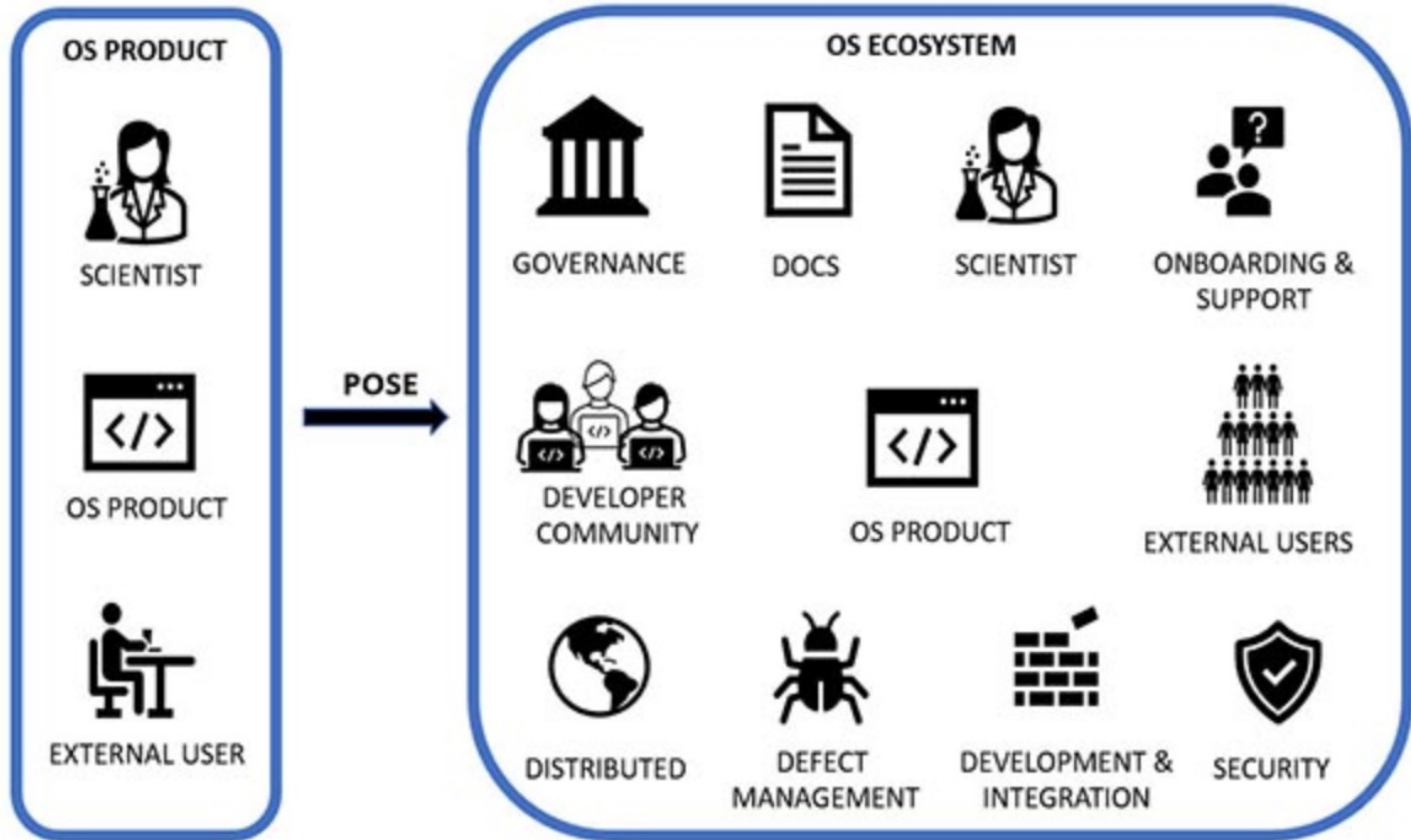
# Target Applicants

- Have an existing open-source product/class of products
- Have active users outside of the founding team
- Need to build open-source ecosystems
- Willing to take responsibility for creating and managing the processes and infrastructure

# What is an Open-Source Ecosystem (OSE)?

- A self-sustaining organization
- Enables ongoing, distributed, asynchronous development of an open-source product
- Uses an open-source licensing model
- Key components:
  - A leadership team for governance and management
  - A decentralized and open network of intellectual content developers
  - Users whose needs serve to guide the evolution of the product
- A key aspect of successful OSEs is their value in demonstrating the potential of a technology at scale in diverse application scenarios.

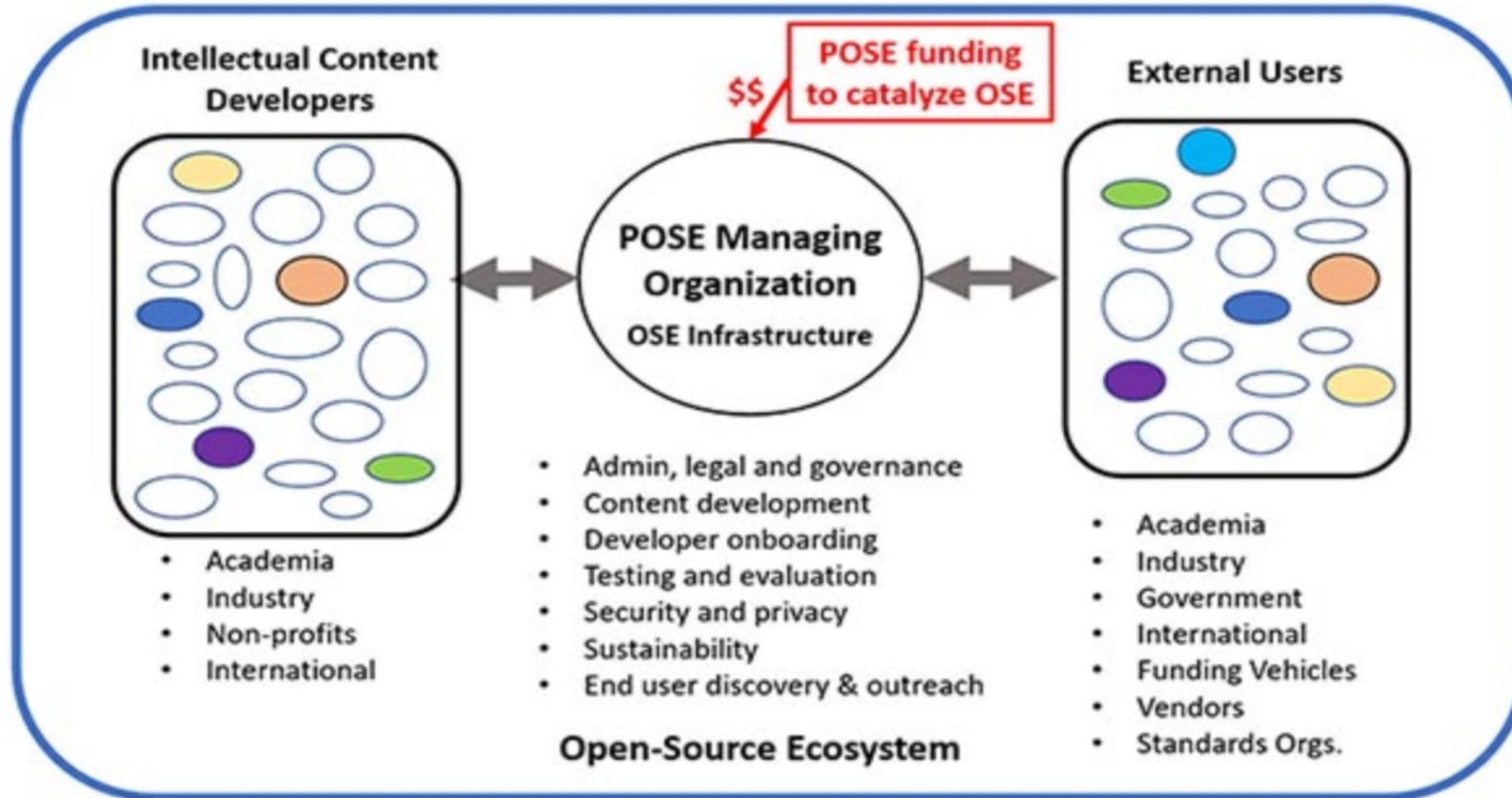




# POSE Guidelines

- Phase I (\$300,000 up to one year):
  - **Scope and plan for an OSE** (ecosystem discovery, organization and governance, community building)
  - Up to 7 pages project description
- Phase II (\$1,500,000 up to two years):
  - **Establish and expand a sustainable OSE** (Ecosystem Establishment/Growth, Organization and Governance, Continuous Development Model, Community Building, Sustainability)
  - Up to 15 pages project description
- The primary distinction between Phase I and Phase II:
  - Phase I's scoping and planning projects are intended for organizations that are less experienced or knowledgeable about their user base
  - Phase II focuses on the development of non-technical roles within an open source project; e.g. corporate governance, legal and administrative functions, licensing, etc
    - Phase II must have a **plan for sustainability** of the project after two years of POSE funding.
- Estimated Number of Awards: 30-50 (20 Phase I, 10 Phase II), with anticipated funding amount \$27,800,000

# Role of the POSE Managing Organization



# Proposal

- New required sections
  - Context of OSE, includes guiding principles and long-term vision; specific societal or national needs and the anticipated broader impacts
  - A pointer to the existing publicly-available open-source product
    - Both Phase I/II should have an existing Git-style repo
  - Details on the current status of the open-source product
  - A description of the problem being addressed
  - A strong justification on team's qualifications
  - A security plan that includes a discussion of how user data is handled (data privacy) and how code quality is ensured
    - Data management plan should also address security
    - Focus on the security of the “software supply chain” using tools like automated testing, CI/CD, bots, Software Bill of Materials (SBOM)

Past funded proposals

<https://www.nsf.gov/awardsearch/simpleSearchResult?queryText=POSE%3A+Phase>

# POSE Community Discovery Component

POSE now requires a I-Corps style interview process to identify your OSE's userbase

- 4 week required program in July/August
- 60 interviews required over the 4 weeks with a final report out
- Seems to be required for both Phase I and Phase II
- ***Consider who will be your community manager and industry mentor for any proposal!***

- 3-person team
  - **Team Lead** – Conducts most customer discovery interviews and gives progress reports at each meeting. We suggest that this might be a person who is regularly involved in communications with your users or stakeholders. Consider a graduate student/post-doc for this leadership role.
  - **Community Manager** – Jointly responsible for interviews and data collection/submission and should have an extensive understanding of the solution's potential user base. Should be the PI or co-PI.
  - **Industry Mentor** – Firsthand OSE experience to help guide efforts; should be independent of the technical development
- All team members must attend all sessions, engage in interviews
- Cameras on, prepared to fully engage
- 15+ interviews per week – 60+ total
- Weekly report-outs to present key learnings



*Some of the Instructions from NSF POSE July 2024 Training Session*

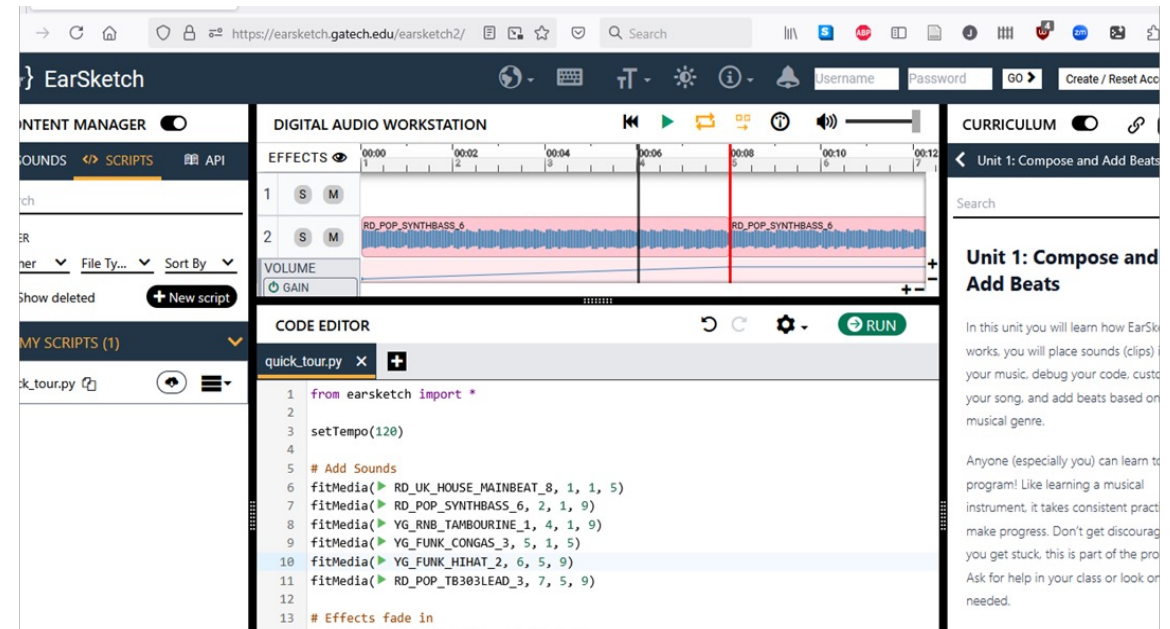
Note that NSF has also shared a DCL (NSF 24-110) to provide funding for this effort as of July 2024.  
<https://www.nsf.gov/pubs/2024/nsf24110/nsf24110.jsp>



# POSE Recent Examples

Recent Phase 1 awardees at GT include Earsketch and [QCSchema](#)

Stephen Garrett of Earsketch presented at the 2025 OSPO workshop and shared Insights from their Phase 1 experience [\[Figshare Link to Slides\]](#)



*Earsketch, a 2024 POSE Phase 1 Awardee.*

# NSF Safe-OSE (NSF 24-608)

Safe-OSE is focused on supporting **mature** open source ecosystems, with a focus on safety, security, and privacy of these OSE organizations

- *Projects that are not yet at the OSE stage (target of the POSE Phase 2) are likely not eligible*

## Differences with POSE

- 2 years, \$1.5M (versus \$1.2M for POSE Phase 2)
- Focuses mostly on improving the security of an existing open source ecosystem rather than building an OSE
- Preproposal process and institute limits

## Similarities with POSE

- Does not support research or feature development for OSS
  - Focus is on improving an OSS organization and codebase
  - NSF 23-149 is mentioned as a research-oriented program (currently archived)
- Similar proposal requirements
  - E.g., 5 letters are highly suggested for both

### **Limit of 2 pre-proposals per institute!**

**GT Internal Submission Deadline:** Wednesday, August 27, 2025 [\[InfoReady\]](#)

**GT Internal Pre-Proposal Deadline:** Monday, September 29, 2025

**NSF Preproposal Deadline:** Tuesday, January 13, 2026

**NSF Proposal Deadline (if encouraged):** April 28, 2026

# NSF Safe-OSE (NSF 24-608)

Preproposal is 5 pages and must include the following:

1. Current status of the targeted OSE with references to its management organization
2. Describe the national/societal/economic impacts of the OSE.
3. Articulate the targeted classes of safety, security, and/or privacy vulnerabilities to be addressed and the broader impacts of addressing them. Discuss, as appropriate, the potential attacks that could take advantage of these vulnerabilities.
4. Briefly describe a development plan to address these vulnerabilities.
5. Briefly describe an evaluation plan to assess the efficacy of the work.

[\[Safe-OSE Program Overview\]](#)

16 [\[FAQs for Safe-OSE\]](#)

[\[2024 Webinar for Safe-OSE\]](#)



# OSPO And GT Resources

The Open Source Program Office is not a large unit, but we can support the following:

- Proposal description paragraph defining the OSPO's role
- The OSPO can provide a letter, but it may be better to have other collaborators instead
  - Letters for this program do not have to follow the “generic” NSF format but should indicate the role of the collaborator as **third-party users or contributors to the open-source product**
  - It's highly suggested to have **5 letters**, especially for Phase II proposals
- Pointers to useful tools and resources to improve your open source project
- Advice on licensing, best practices, and areas of focus to improve your OSE
- ***In some cases***, we may also be able to help with identifying industry mentors for community engagement

## ***Sample Text for NSF Proposal (can be tweaked)***

*The Georgia Tech Open Source Program Office (OSPO) provides a central resource for training, best practices, and advice on how to grow and support open source projects and ecosystems. In the context of this proposal, the GT OSPO will work with the PI to provide advice on how to best evolve their project towards a sustainable open source ecosystem through training seminars, advice on licensing and open source best practices, and tools and templates meant to help improve the quality of new and existing open source repositories.*

# Useful Software Resources You May Consider

RepoAuditor tool from Scientific Software Engineering Center

<https://github.com/gt-sse-center/repoAuditor>

RepoLinter from TodoGroup

<https://github.com/todogroup/repolinter>

Repo Security Audit Scorecards

<https://securityscorecards.dev/>

Templates for creating Contributing Guide

<https://github.com/nayafia/contributing-template>

Governance model explainers

<https://github.com/gt-ospo/oss-training/blob/main/notebook-lessons/oss-module-06-governance-foundations.md>

- Points to additional resources for selecting a governance model

Repo Scaffolding Resource

<https://dsacms.github.io/repo-scaffolder/>

## Introduction

### Write something nice here!

First off, thank you for considering contributing to Active Admin. It's people like you that make Active Admin such a great tool.

[source: [Active Admin](#)] Need more inspiration? [1] [Read The Docs](#) [2] [Mustache.js](#)

### Tell them why they should read your guidelines.

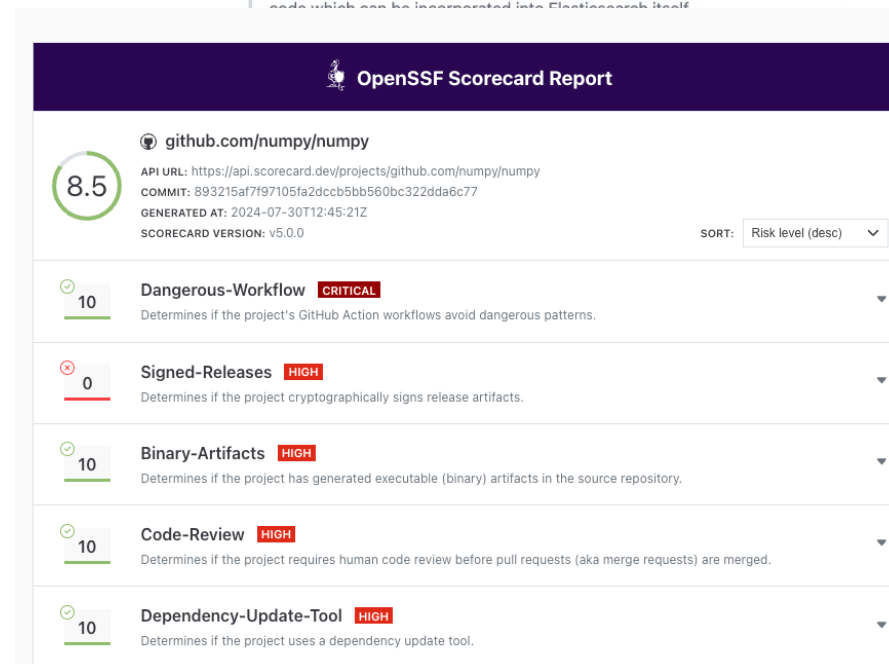
Following these guidelines helps to communicate that you respect the time of the developers managing and developing this open source project. In return, they should reciprocate that respect in addressing your issue, assessing changes, and helping you finalize your pull requests.

[source: [Hoodie](#)]

### Explain what kinds of contributions you are looking for.

Keep an open mind! Improving documentation, bug triaging, or writing tutorials are all examples of helpful contributions that mean less work for you.

Elasticsearch is an open source project and we love to receive contributions from our community — you! There are many ways to contribute, from writing tutorials or blog posts, improving the documentation, submitting bug reports and feature requests or writing code which can be incorporated into Elasticsearch itself.



# Useful Training Resources

## Books

### Open Source Projects – Beyond Code

- Covers governance models and the full open source lifecycle
- Available for free from GT Library via O'Reilley

### Working in Public

- Recent book focusing on GitHub and open source developer interviews

## OSS Training

- GT OSPO training is under development
  - We would appreciate any feedback from you!
- Currently covers git, unit testing, CI/CD, code review, governance models, open source project best practices
  - <https://github.com/gt-ospo/oss-training>
- Most are runnable notebooks via Google Colab



```
oss-module-04-ci-cd.ipynb
File Edit View Insert Runtime Tools Help Last edited on June 12

+ Code + Text
We run in parameter using separate terminal.

GitHub Workflows

Workflows are typically specified in the top-level directory .github/workflows. We will incrementally improve a test YAML file from our
sample repo to investigate the pieces of a typical workflow.

NOTE

To follow along with this training, please fork the testing-with-ci-cd repo so you can modify the .yaml files and check the outputs.

A Simple Testing Workflow (V1)

The first version of our workflow, test-v1.yml shows a very basic Python-oriented workflow. Note that the job is named test-v1, it uses a
GitHub supported runner based on an Ubuntu VM, and it executes several actions and steps to install a specific version of Python.

name: Grade Project Test - V1

on:
  push:
    branches:
      - 'main'

jobs:
  test-v1: # <-- this job name is totally up to you
    runs-on: ubuntu-latest # <-- usually ubuntu-latest, windows-latest, or macos-latest

    steps:
      - uses: actions/checkout@v4 # <-- every job runs on a clean runner, so you almost always start a job by checking out the code
```

# Other Sources of Funding for OSS

Chan Zuckerberg Initiative [\[Link\]](#)

- Last call was in 2023
- Focused on bioscience related projects

Apereo Foundation [\[Link\]](#)

- Supports a grant prioritization framework and an incubation program for scaffolding of new projects

Better Scientific Software Fellowships [\[Link\]](#)

- US based call for scientific software funding for workshop, tutorials, and tools that engage the scientific computing community

Research Software Alliance [\[Link\]](#)

- Has an updated list of related calls

GT OSPO grants and Virtual Summer Internship Program [\[Link\]](#)

The background of the slide is a faded, high-angle photograph of a large, multi-story brick building with many windows, likely a Georgia Institute of Technology building. In the foreground, several people are walking away from the camera on a paved path that leads towards the building. The overall color scheme is muted, with a light beige or cream tone. On the left side, there are some faint, white, geometric line art shapes.

**Reach out to us with questions!**

Email: [ospo-directors@groups.gatech.edu](mailto:ospo-directors@groups.gatech.edu)