BROADENING STUDENT PARTICIPATION IN CYBERINFRASTRUCTURE RESEARCH AND DEVELOPMENT

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WHAT IS CI COMPASS?

CI Compass is a National Science Foundation Cyberinfrastructure Center of Excellence

- CI Compass provides expertise and active support to cyberinfrastructure (CI) practitioners at NSF Major Facilities (MFs) to accelerate the data lifecycle (DLC) and ensure the integrity and effectiveness of the CI upon which research and discovery depend
- MFs are the largest-scale scientific efforts that the NSF supports and have a wide range of CI for capturing, processing, archiving, and disseminating data

CI COMPASS STUDENT FELLOWSHIP PROGRAM (CICF)

Broaden student participation in CI research, development, deployment, and operations

Provides undergraduate student fellows the opportunity to:
- Learn about CI development and MFs
- Develop CI-related skill sets important to the work of MFs
- Engage with CI Compass and MF personnel through a virtual training and research program

CICF SPRING PROGRAM STRUCTURE (12-weeks, virtual)

TECHNICAL SKILLS PROGRAM

Provide students experience in technical skills relevant to CI
- Python, Jupyter, Git, pytest, Containers, Docker, virtual machines
- Parallel and distributed computing
- Cloud computing, Data Workflows, Pegasus

RESEARCH SKILLS PROGRAM

Provide students experience researching MFs and the DLC and help them understand the importance and context of MFs, and the related data and CI
- Research the data lifecycle of specific MFs
- Conduct MF DLC presentations to CI Compass and MF representatives
- Interact with MF guest speakers

CICF SUMMER PROGRAM STRUCTURE (Optional. 6-weeks, virtual or in-person)

Provide students a hands-on, project-based learning experience at MFs or with CI Compass team members
- Employ the relevant skills they learned in the spring program
- Gain experience applying their technical skill sets on projects relevant to MFs and CI
- Gain experience working on technical research teams

CICF FUTURE PLANS

Expand the scope of the current CICF Program
- Updates to curriculum and program structure based on observations and evaluation data
- Broadly advertising faculty mentoring and student opportunities to include participants from MSIs, HSIs, and Tribal Colleges
- Increasing the number of student fellows, faculty mentors, and peer mentors

REFERENCES

For more information about CI Compass contact us at contact@ci-compass.org
- We are currently recruiting for faculty mentors and partnerships for summer projects.

To learn more about the CI Compass Fellowship program visit, https://ci-compass.org/about/fellowships/

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