C-StREAM Fellowship Program Position
Innovating Data Visualization Workflows

The [Chesapeake Student Recruitment, Early Advisement, and Mentoring Program](#) (C-StREAM) is an inclusive program focused on recruiting, advising, and mentoring college students who identify as people of color, persons with disabilities, members of the LGBTQAI+ community, persons from economically disadvantaged backgrounds, and first-generation college students who are currently pursuing an undergraduate degree. C-StREAM is designed to advance the participation of students from diverse communities in environmental science, protection, restoration, education, management, and policy careers. C-StREAM endeavors to support this goal by developing inclusive career pathways that result in greater diversity in the environmental workforce.

Project Description

The [Chesapeake Bay Program](#) (CBP) and [Chesapeake Research Consortium](#) (CRC) seek a C-StREAM summer Fellow for late May through mid-August (12 weeks) to provide support to the Geospatial Science and Applications Team (GSAT) to help streamline and innovate our data visualization workflows. The student will explore common visualization tasks, such as creating maps, graphs, and tables for presentations, publications, and fact sheets, which often require significant time and effort. The project will focus on automating these processes to save resources, improve consistency, and enhance quality. Tasks may include developing user-friendly tools or prototypes that produce visuals such as static maps, summary tables, or interactive layers. This project offers an exciting opportunity to blend geospatial data, automation, and user-centered design. By the end of the fellowship, the selected student will have strengthened their programming skills and developed tangible work products to display in their professional portfolio.

Opportunities

This fellowship will provide a unique opportunity to contribute to large-scale, long-term natural resource management, and policy development critical to understanding new ways to improve Chesapeake Bay water quality and manage Chesapeake Bay living resources most effectively and efficiently across the 64,000 square mile watershed. The C-StREAM Fellow will gain experience in natural resource management, restoration science, and environmental policy. In addition, this fellowship experience will provide insights into careers in natural resource management, policy development, and science beyond those applied for and allows students to

make connections with established environmental management, science professionals, and stakeholders.

Responsibilities and Deliverables

- Investigate existing geospatial visualization technologies, tools, libraries, or software platforms that can automate geospatial visualization tasks and streamline workflows such as ArcGIS, QGIS, Folium, Cartopy, Google Earth Engine, Plotly, Kepler.GL, Geopandas, Rasterio, Bokeh, Quatro, Shiny. Preferably using languages such as Python, R, Markdown, LaTeX etc. (Proficiency in all the above is not required but must be eager to learn and take on new challenges).
- Create accessible, non-coding solutions (e.g., templates, scripts, or simple GUIs) that allow team members to generate visualizations quickly and efficiently.
- Develop a prototype pipeline or tool to automate the creation of static maps, summary tables, or other visuals. Complete documentation describing how to use the prototype.
- Prepare a case study highlighting the tool's use in a GSAT project.
- Presentation in the C-StREAM symposium at the conclusion of the fellowship summarizing the experiences gained and work conducted.

Eligibility

- Must be a college-level student entering sophomore, junior, or senior year of undergraduate study in the fall of 2025 or current seniors graduating in May of 2025.
- Must be legally authorized to work in the United States as a US citizen or national, asylee, refugee, or lawful permanent resident and willing to undergo a security background check.

Desired Qualifications

- Interest in environmental science, communication, data visualization, GIS/mapping application, and/or community engagement.
- Basic GIS experience and programming experience are strongly recommended.
- Willingness to learn new technologies and develop creative solutions to technical problems.
- Interest in learning more about coordinating partnership input and collaboration on CBP products and deliverables via coordinating meetings, soliciting partner input, and organizing outreach.
- Motivated self-starter with the ability to work proactively and reason independently, consistently share progress updates, and recommend or inquire about next steps toward project completion.
- Ability to work well with others, and to seek out and incorporate feedback into work products.

Work Location and Duration

This position will be a hybrid position with options for remote work as needed. This in-person and virtual opportunity will be based out of the EPA's Chesapeake Bay Program Office in Annapolis, Maryland. The fellowship is scheduled to begin on May 19, 2025, and end Friday, August 8, 2025. These are our preferred dates, but the dates can be adjusted to accommodate a student's school schedule if required. We plan on providing Fellows with access to an EPA computer, email, and phone services if this fellowship is offered in person. If the fellowship is virtual, Fellows will need to have access to suitable internet, computer, and communication resources.

Compensation

The Fellow will receive a stipend at the end of each month, for a total of up to $6,000 for the equivalent of 12 weeks of full-time activities. Candidates should expect to follow a normal weekday work schedule (roughly 9-5, M-F) with occasional variations for possible field work or other activities. No benefits are provided. A one-time housing and transportation allowance of $1,000 is available to each Fellow to assist with living and transportation expenses. Funds are also available to compensate Fellow for occasional work-related travel and professional development activities.

Diversity and Inclusion

The Chesapeake Research Consortium and the Chesapeake Bay Program are committed to supporting a diverse and inclusive science-oriented workforce. Our fellowship program endeavors to recruit from a diverse, qualified group of potential applicants to secure a high-performing workforce drawn from all segments of American society. We are strongly supportive of broadening the participation of historically black colleges and universities, Hispanic serving institutions, tribal colleges and universities, and institutions that work in underserved areas. We highly encourage applications from students at any of the above institutions as well as students that identify students who identify as people of color, persons with disabilities, members of the LGBTQAI+ community, persons from economically disadvantaged backgrounds, and first-generation college students.

Application Instructions

Application instructions, required materials, and the C-StREAM application portal can be found on the C-StREAM website (http://chesapeake.org/c-stream/).

The deadline for applications is February 14, 2025.