

Enhancing Interactivity and engagement to the Science Gateway Community Institute Workforce Development Site

2017

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Abstract

The Center of Excellence in Remote Sensing Education and Research (CERSER) on the campus of Elizabeth City State University is a founding member of SGCI led by San Diego Supercomputing Center and the Science Gateways Community Institute (SGCI). One of the five areas of SGCI is the Workforce Development led by Dr. Linda Hayden. Workforce Development aims to nurture the next generation of gateway users and developers and engage the potential of students from underrepresented groups.

Abstract

As science today grows increasingly computer based, it poses challenges and opportunities for researchers. Scientists and engineers are turning to gateways to allow them to analyze, share, and understand large volumes of data more effectively. The existence of science and engineering gateways and the sophisticated cyberinfrastructure (CI) tools together can significantly improve the productivity of researchers. Most importantly, science gateways can give uniform access to the cyberinfrastructure that enables cutting-edge science.

Abstract

The goal of the web development team was to increase the interactivity of the SGCI Young Professionals site to attract potential members and disseminate information. This was completed utilizing WordPress Widgets to provide graphical and interactive components. Bootstrap components (HTML, CSS, and JavaScript) were also researched for their inclusion into the current WordPress Content Management System (CMS) and the future Liferay CMS.

Research Overview

CERSER
+
San Diego
Supercomputing Center
and Science Gateways
Community Institute

Enable researchers to
analyze, share, and
understand large volumes
of data more effectively

Improve the **productivity**
of researchers

Workforce Development
is one of five key areas
within SGCI



Interactivity



Potential Members



Information

Science Gateways Community Institute (SGCI)

- The Science Gateway Community Institute (SGCI) **Workforce Development Team** is tasked with attracting professionals, faculty, and students to participate in conferences, workshops, and internships
- **Dr. Linda Hayden** is the lead on this component of SGCI

Workforce Development Page

Workforce Development

Read about our summer 2017 programs for undergraduate and graduate students!

Keep the best and the brightest in the sciences

Workforce Development aims to

- Increase the pipeline of young developers.
- Tap the unrealized potential of students from underrepresented groups.

To do this, we are using several strategies:

1. Fellowships and internships for students committed to learning gateway technologies
 2. Connections with STEM professors integrating gateways into their courses
- Efforts to gain acceptance for job titles and career tracks in gateway development

Our implementation includes

- Establishing the [SGCI Young Professionals Network](#).
- Establishing a center for training and education at Elizabeth City State University.
- Developing publicly accessible, online training and curricula.
- Coordinating with other areas of SGCI and partners to offer internships.
- Identifying gateways that are relevant to domain-based courses.

This area is led by [Linda B. Hayden](#), Elizabeth City State University.

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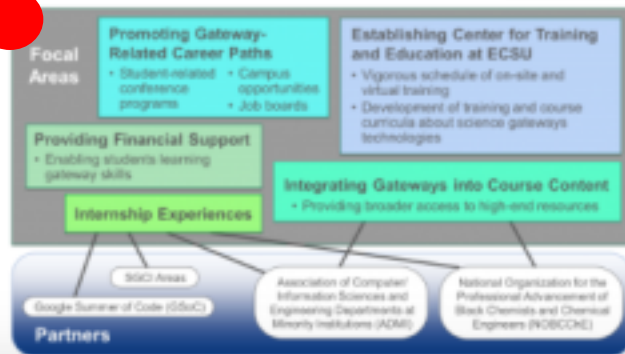
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Tools

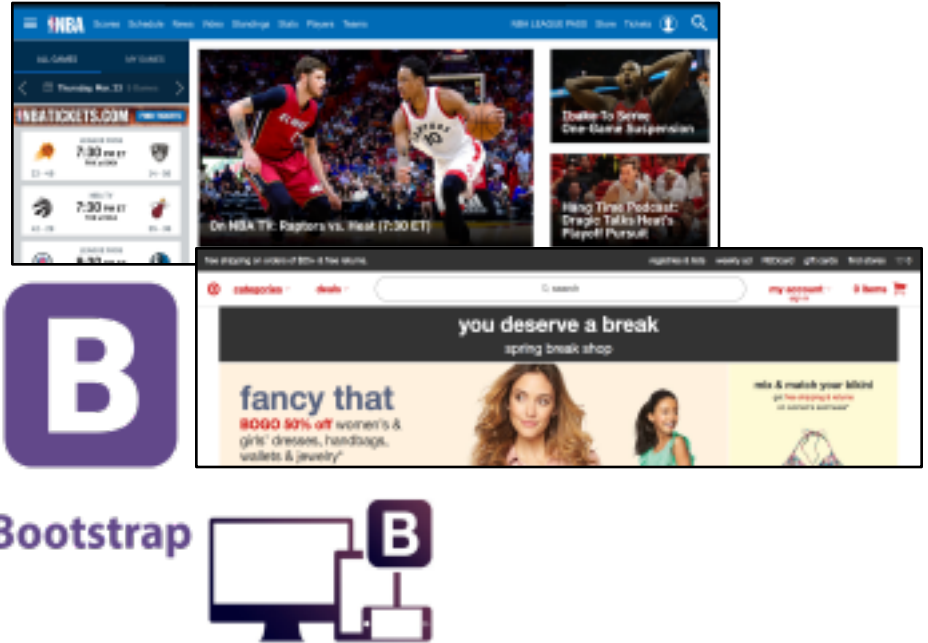
WordPress

- *“publishing platform that makes it easy for anyone to publish online, and proudly powers millions of websites”*
- Content Management System (CMS)
- The SGCI site uses a **WordPress theme**, which controls its general look and feel



Bootstrap

- “the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web”
- Key Benefits
 - Components
 - Navigation
 - Iconography
 - Dropdowns
 - Ease of Use
 - Open-Source



Goal

Use Bootstrap
components in
WordPress to enhance
the SGCI site

Roadblock

- Current site uses WordPress theme
- Cannot use Bootstrap components unless using a Bootstrap theme in WordPress



Page Enhancements

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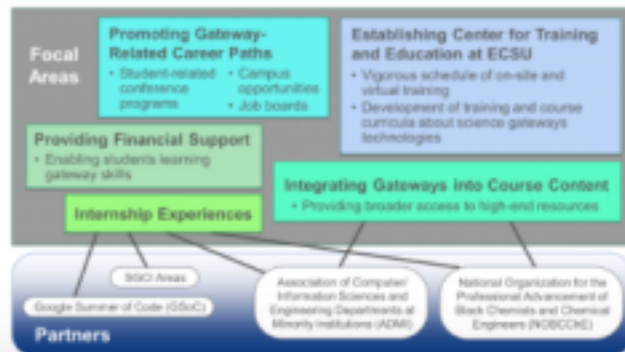
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Widget: *Image Hover Effects*

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Our implementation includes



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SGCI Summer Programs for Undergraduate and Graduate Students

SGCI Young Professionals

Widget: *Image Hover Effects*



Widget: *Soliloquy*

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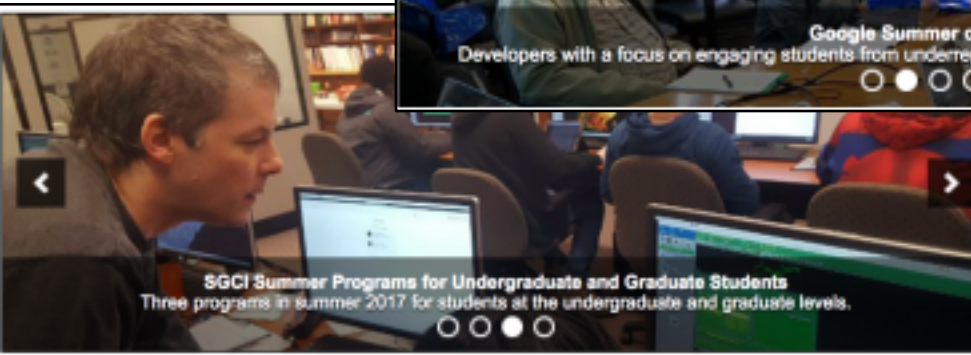
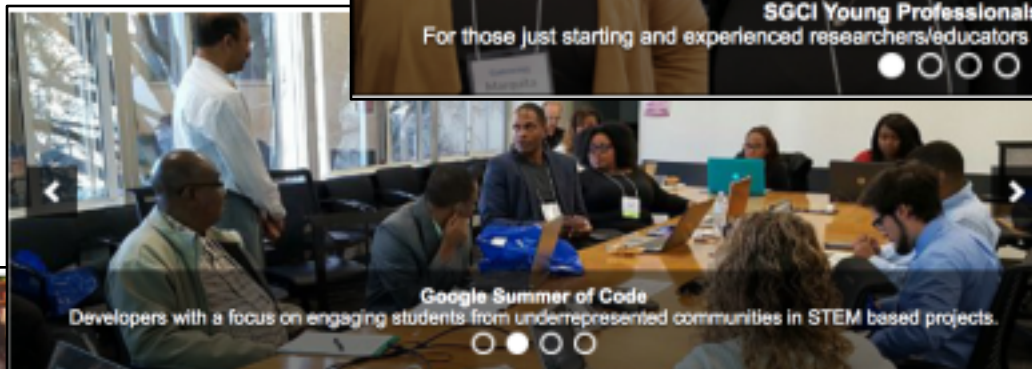
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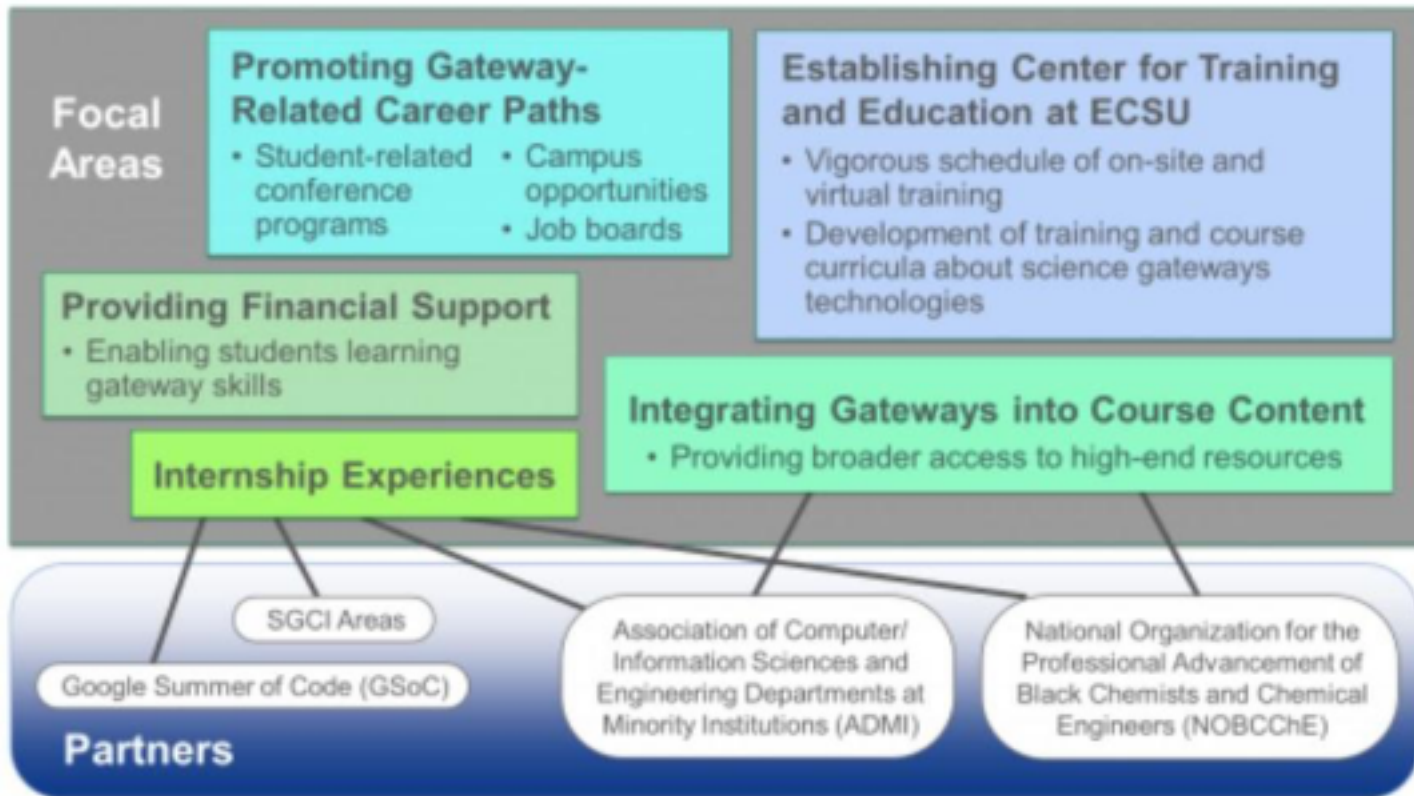
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Widget: *Soliloquy*





FOCAL AREAS

Promoting Gateway-Related Career Paths

- Student related conference programs
- Campus Opportunities
- Job boards

Establishing Center for Training and Education at ECSU

- Vigorous schedule of on site and virtual training
- Development of training/course curricula about science gateways technologies

Internship Experiences

Providing Financial Support

Enabling students learning gateway skills

Integrating Gateways into Course Content

Broader access to high-end resources

SGCI Areas

Google Summer of Code (GSoC)

Association of Computer/ Information Sciences and Engineering
Departments at Minority Institutions (ADMI)

National Organization for the Professional Advancement of Black
Chemists and Chemical Engineers (NOBCChE)

PARTNERS

Demo

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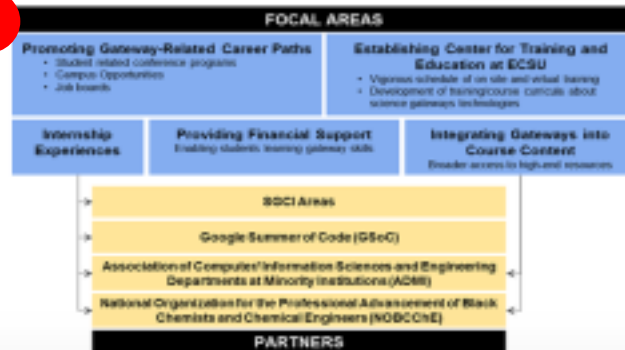
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Conclusion

- Team was not able to use Bootstrap components with WordPress theme
- **Liferay components + WordPress widgets** can fulfill some of the capabilities of Bootstrap components



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Future Work

- Future CMS of the SGCI site is **Liferay**
 - Liferay offers “developers a complete platform for building web apps, mobile apps, and web services quickly, using features and frameworks designed for rapid development, good performance, and ease of use”
- Bootstrap is **compatible** with Liferay
- Long-term goals
 - Develop CERSER’s current sites into responsive sites using Bootstrap
 - Create Facebook Group for Young Professionals to network



Bootstrap



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Acknowledgements

Dr. Linda Hayden of Elizabeth City State University

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QUESTIONS