Research Computing Students Impact Research Across Northwestern

This summer, eleven outstanding students supported the work of Northwestern IT Research Computing Services and Northwestern researchers by creating interactive data visualizations, teaching workshops, answering Quest help tickets, collecting and analyzing data, keeping the community informed of events, and creating new tools and workflows to enhance researchers’ use of Quest. Both undergraduate and graduate students gained new computational skills and practical experience while extending the scope of Research Computing Services’ engagement with the community.

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Featured Researcher
Boris Rösler

It is not the magnitude alone that determines the damage caused by an earthquake. Ground motion can also depend on the direction a city is located from the earthquake's epicenter. Boris Rösler, third year graduate student in the Weinberg’s Department of Earth and Planetary Sciences, developed a digital product for all seismologists which displays radiation patterns for surface waves, explaining the pattern of ground motion for different earthquakes.

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Featured Staff
Frank Elavsky

Frank Elavsky joined the Research Computing Services team in May 2017. He is a passionate evangelist for effective data practices – in analysis, management, and especially visualization. He loves to teach workshops on a variety of data visualization topics, ranging from Intro to Visualization for Scientific Research to advanced technical topics like Animating Visualizations on the Web in D3. He has a broad range of skills related to visualization, from programming in JavaScript to data-workflows in Tableau. His two favorite kinds of projects are creating online interactive tools that helps promote research findings and helping researchers view their data in a way they have never seen before. He has a BS in Computer Information Systems and a BA in Philosophy.

If you have a big, data-driven research project, Frank would be happy to see how he can maximize the effectiveness of your visualizations – from figures in your papers to exploratory research tools.

Technology Spotlight
Containers

Container technology offers a way to package software along with any libraries, data, tools, settings, or other dependencies in a format that can be run by any computer. The advantages of containers include portability, reproducibility, and freedom for users to run their software of choice on any system, without having to rely on system administrators to install, configure, and maintain software. Singularity is a software container technology designed for scientific workloads on traditional high performance computing environments, such as Quest, while maintaining compatibility with the popular Docker container format. In addition to the benefits offered by other container technologies, Singularity has security features designed for a multi-user environment and a simple image format that makes moving images quick and easy. Singularity is available on Quest today.

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Improvements and Updates

Quest 8 Nodes are Now Available
New computer nodes - known as Quest8 - have been added to general access. They have 28 processors and 96 GB of memory. Processor speeds on these nodes have increased significantly. As a result, jobs that run on these nodes should be completed more quickly.
Upgrading the Module System to Lmod on Quest
In Summer 2018, the Quest software module environment was upgraded from TCL/C based system to Lua based Lmod. The new environment offers a more flexible hierarchical layout of modules to handle software conflicts.

Did you Know?
We have streamlined the process for requesting software installations on Quest. Documentation has been updated to reflect the new process.
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Upcoming Training

Evanston
Computational Skills for Researchers
Command Line: vi/vim
Wednesday, November 7, 2018, 3-4pm

Quest: Singularity Containers
Thursday, November 15, 2018, 3-4:30pm

CUDA: Introduction
Thursday, November 29, 2018, 2:30-4pm

The Researcher's Toolkit
Video Production and Prototyping in Mudd: The Lightboard Studio and Maker Lab
Wednesday, October 31, 12-1pm

An Introduction to Privacy Considerations in Research and Teaching
Tuesday, November 6, 12-1pm

Cloud Computing Essentials
Tuesday, November 27, 12-1pm

Chicago
Computational Skills for Informatics
Research Data: Best Practices to Manage, Preserve and Share It
Tuesday, Oct 30, 11:30am - 1:00pm

Globus for Research Data Management
Tuesday, Nov 6, 11:30am - 1:00pm

Introduction to RNA-Seq Analysis on Quest
Tuesday, Nov 13, 11:30am - 1:00pm
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