

Research Computing

Accelerating research through the effective use of technology in science.

Researchers at Northeastern University have access to a comprehensive catalog of high-performance computing services to help power their discoveries. Within IT Services, the Northeastern Research Computing team is a group of Ph.D.-level scientists, machine-learning performance and research software engineers, systems administrators, and graduate student assistants who are available to assist with research computing needs at all stages of a research project.

Why Research Computing at Northeastern

- **Scalable:** The research computing resources are structured for scalability.
- **On-demand:** The Research Computing team provides consulting, training, and documentation for researchers, students, and instructors.
- **University-wide support:** A dedicated team fully committed to researchers across all Northeastern global campuses.
- **Secure environment:** Compute and storage resources that meet research data security requirements, including CUI, HIPAA, and sensitive research.

Service Offerings

- Centralized high performance computing resources (CPUs and GPUs)
- Multiple tiers of storage resources
- Installation of open-source scientific software
- High-level technical and scientific consultation
- Optimization of scientific workflows (machine learning, bioinformatics, molecular dynamics, and spin-lattice dynamics)
- Documentation
- Training

The Research Computing Team

The support team is continuously working to offer and enhance high-performance computing solutions to help Northeastern's research community accelerate their time to science.

- System administrators and engineers build a stable, efficient, high-throughput environment for computational science.
- Scientists engage with faculty, grow the user community, and help leverage MGHPCC as a strategic resource.
- Leaders streamline services and support paths, creating a responsive user-support system augmented by graduate student assistants.



Massachusetts Green High Performance Computing Center

What Powers the Service

Discovery is a high-performance computing resource for the Northeastern University research community. The Discovery cluster is located in the Massachusetts Green High Performance Computing Center (MGHPCC) in Holyoke, Massachusetts. MGHPCC is a 90,000-square-foot, 15-megawatt research computing and data center facility that houses computing resources for five institutions: Northeastern, Boston University, Harvard, MIT, and UMass.

Key Stats

22 PB of data storage

45,000-plus CPU cores



1,100 compute nodes

400-plus GPUs

Accelerate Your Research Today

Get started with a consultation on any and all computational science-related topics, including *research data workflows*, *code optimization*, *general cluster use*, among other capabilities. All consults are held online, on your terms.

Learn more about Research Computing at rc.northeastern.edu, or get in touch at rchelp@northeastern.edu.



Scan the QR code to schedule a consultation with a team member!