Research Technology

Research Technology (RT) is a directorate of Tufts Technology Services (TTS). RT enables the university and its diverse academic communities to realize their vast potential in research through the innovative design and meaningful integration of technology to meet broad and local goals.

Research Technology Infrastructure & Tools

- Research High Performance Computing: A RedHat Linux High-Performance Computing Cluster is available to researchers in need of computing power. Large scale computing in Sciences, Engineering and Bioinformatics is supported. The cluster has ~2700 physical cores and additional capacity is added yearly. This central service is offered at no cost to clients. A model for faculty contributed nodes is available. Request a cluster account here: http://research.uit.tufts.edu. Visit http://go.tufts.edu/cluster for more details.
- Research Storage: Researchers who need backed-up network-accessible storage for their research data can request storage shares from 50GB to several TBs. This is exclusively for research storage and it does not overlap with existing personal (P:) and departmental (Q:) drives where non-research documents should be stored. This central service is offered at no cost to clients. Multiple shares can be requested to meet needs. Access to research storage by outside collaborators can be granted. Request research storage here: http://researchstorage.uit.tufts.edu.
- Software Licensing: RT provides access to many public domain research codes and commercial software packages on our research cluster as well as network concurrent licensing for the desktop on a per product basis. This central service is offered at no cost to clients. If software needs to be run on the cluster rather than on a desktop, a cluster account is required. For licensed software details visit: http://it.tufts.edu/soft
- Tools for Bioinformatics: Many popular public domain research bioinformatics codes are available on the Tufts Research HPC cluster. Tufts TTS Bioinformatics Server offers a gene sequencing package Emboss/wEmboss (http://emboss.uit.tufts.edu/). Request an Emboss account here: http://research.uit.tufts.edu.
- XSEDE: The Extreme Science and Engineering Discovery Environment (XSEDE), funded by the NSF (National Science Foundation) is the next generation replacement for TeraGrid. Its goal is to provide access to supercomputer resources for US based researchers including training, education, and outreach activities. TTS Research Technology is available for consultation to better help potential users understand how XSEDE compliments the Tufts High-Performance Computing Cluster. Visit http://it.tufts.edu/xsede/ for more details.

Research Consulting Services

- Technology Consulting: We assist faculty and departments with research, information, and recommendations concerning appropriate technologies for research. This includes research technologies such as high-performance computing, statistics, bioinformatics, specialized software, storage, research data management. It also includes IT support specific to research operations (e.g., web, applications, storage, databases, instrumentation, networking, documentation, integration, security) and configuration/lifecycle management.
- Monitoring, design, implementation and application of emerging technologies for research applications: We constantly investigate how Tufts researchers can excel in their fields by leveraging new technologies.

Geographic Information Systems

- GIS Center: We manage GIS services across the Tufts campuses, including the GIS Center, located in the Tisch Library, which provides access for the Tufts community to the latest GIS technology. See http://gis.tufts.edu for details.
- Instructional and Research Services: At the GIS Center and throughout the university, we offer several GIS-related services including GIS training for faculty and students through workshops and courses, assistance with incorporating GIS modules into Tufts' courses, and individual and project-based research consulting.
- Specialty Services: We also provide specialty services such as map design, geo-processing, spatial analysis, application development, data conversion and development, software licensing, etc.
- GeoData@Tufts: Tufts is collaboratively developing an open source, federated web application to discover, preview, and retrieve geospatial data. GeoData@Tufts combines an intuitive, map-based search interface along with traditional text-based metadata search tools for rapid data discovery and for use in teaching, learning, and research. It is comprised of several universities and organizations and makes thousands of geospatial data layers available through a single open source interface. Visit http://geodata.tufts.edu/

These tools and services are offered at no cost to clients. Research Technology is a directorate of Tufts Technology Services, Tufts University.

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