Carnegie Mellon University

Associate Vice President for Research Computing and Data

Carnegie Mellon University (CMU), a global leader in research and innovation, invites candidates to apply for the newly created role of Associate Vice President for Research Computing and Data (AVP RCD). This role, which will serve in a leadership capacity in both the Office of the Vice President for Research (OVPR) and the Office of the Vice President and Chief Information Officer (OCIO), offers a unique opportunity to elevate and transform CMU's research computing ecosystem so that it supports groundbreaking research, enhances collaboration, and enables leading-edge innovation across the university's research enterprise. After careful study led by university leaders, CMU has committed to significant investment in research computing resources, forming the Office of Research Computing and Data (ORCD) to design, develop, and oversee this initiative.

Research Computing at Carnegie Mellon

CMU stands at the forefront of computational research and data management. CMU's hybrid research computing environments integrate high-performance on-premises systems with state-of-the-art cloud computing platforms, ensuring researchers have the tools they need for high-impact, interdisciplinary collaborations. Through strategic partnerships with major industry leaders, including GPU, CPU, and FPGA manufacturers, CMU is expanding its capacity to support groundbreaking research.

Additionally, given the critical and increasing role of research computing and data, CMU aims to implement a comprehensive and forward-looking plan employing shared infrastructure for advanced computing and data. Such a plan in turn will drive more interdisciplinary collaborations and research within CMU, building upon CMU's strengths, leading to more opportunities for researchers, and creating an environment for trailblazing innovation and distinction.

CMU's strengths in leading-edge computing include:

- The Foundation and Language Model Center, FLAME, brings together researchers focused on powerful, open, and responsible foundation models in AI
- The Robotics Institute, which continues to be the preeminent collaborative hub for the world's visionaries in robotics, rooted in interdisciplinarity and guided by computational thinking
- The AI Institute for Societal Decision Making, an NSF-funded National Artificial Intelligence Research Institute that develops AI to augment human decision-making in societal domains such as public health and disaster management by bringing together AI and social-sciences researchers from across the country
- The LearnLab, which applies big data and big science to enrich learning sciences and generate new insights into how students learn
- The collaborations enabled by the Software Engineering Institute, a federally funded research and development center that conducts R&D in software engineering, systems engineering, cybersecurity, and many other areas of computing

CMU also operates the Pittsburgh Supercomputing Center (PSC) jointly with the University of Pittsburgh. The PSC is national high-performance computing and networking center that provides university, government, and industry researchers with access to leadership class computing, data-handling, and communications systems.

Associate Vice President, Research Computing and Data: Vision and Aspirations

The AVP for Research Computing and Data will spearhead university-wide efforts to create, advance, and sustain a robust, cutting-edge research computing ecosystem, providing strategic vision and direction to shape and execute this effort.

Reporting jointly to the Vice President for Research (VPR) and the Vice President and Chief Information Officer (VP and CIO), the AVP RCD will foster collaboration across research, academic, administrative, and IT domains. This role is vital to enabling CMU's faculty and students to remain at the pinnacle of innovation, discovery, and translation, fostering a community of excellence that empowers research, learning, talent development, and societal engagement.

The planning that led to the creation of this role envisions the AVP RCD forming an enterprise high-performance computing organization with staff specialized in hardware, software, storage, and data along with subject-matter experts who engage researchers across disciplines. The ambition is to develop leadership-class assets and expertise, specifically to advance research and translation in artificial intelligence (AI), machine learning (ML), quantum, and robotics, and other compute-intensive fields including engineering, physical sciences and life sciences, while also continuing to develop centrally designed and managed computing resources for midrange users so as to advance research across all current and future fields at the university.

University sponsors of this initiative, convened by the VPR and CIO, established the framing vision in a document presented to the Board of Trustees in 2025. Its statement of intent reads:

> *"To better serve the research community and the growing demands for campus cyberinfrastructure, CMU is establishing the Office for Research Computing and Data (ORCD), a new university-wide office that will provide strategic research computing and data (RCD) leadership and services to the research and education communities at CMU, coordinate technology investments in RCD and related expertise, and catalyze and nurture RCD-enabled interdisciplinary research – all aimed at fostering a productive scientific and scholarly community of excellence in science and education that empowers research, learning, and societal engagement. This office will also serve as a bridge between CMU and Pittsburgh Supercomputing Center (PSC)."*

CMU began expanding its HPC capacity in early 2025 by adding 297 cloud-based GPUs primarily to support its extensive work in foundation models and applications of AI and ML. The overall case statement targets a leadership-class research computing and data program that includes an initial investment that exceeds $50 million provided over several years, recurring core funding for staff positions, funding to expand and renew leading-edge infrastructure and maintain staff expertise, and additional funding generated by direct participation in grants, indirect-cost recoveries, user fees, and other potential sources such as philanthropy and industry partnerships. The current concept for

HPC and research computing, which the AVP will test, refine, and execute, imagines a tiered, modular infrastructure that integrates current and future on-premises resources with commercial cloud-based assets in a scalable, secure, seamless, and sustainable ecosystem.

Key responsibilities of the AVP position include:

Strategic Leadership
- Define and execute a university-wide vision for leadership-class research computing and data that aligns with CMU's mission and strategic goals as a world-leading computing and AI university.
- Expand upon scalable, sustainable models for service delivery, funding, and resourcing
- Define Carnegie Mellon's vision for engagement with Pittsburgh Supercomputing Center in terms of complementary investments and synergies
- Represent the university in national and international research computing communities, such as the Campus Research Computing Consortium
- Partner with the Office of Government Relations in engaging with local, state, and federal officials, and Business Engagement Center to expand strategic industry partnerships

Innovation and Infrastructure
- Lead the expansion of CMU research computing to best-in-class levels, including advanced capabilities in cloud integration and specialized hardware utilization
- Develop a roadmap for translational computing that fosters innovative architectures and services that may be scaled across CMU researchers and, potentially, beyond the immediate CMU ecosystem
- Oversee the deployment of emerging technologies such as AI accelerators and machine learning frameworks, advanced engineering platforms, and next-gen physics simulations capabilities
- Partner with external organizations and vendors to bring cutting-edge solutions to campus
- Ensure the security, reliability, and scalability of research computing infrastructure to meet the demands of current and future research
- Optimize a multi-year approach to balancing on-premises resources and cloud resources with attention to all factors and ramifications of the approach including sustainability
- Continue to develop cyberinfrastructure suited to researchers across all of CMU
- Oversee the development and deployment of controlled research computing cloud and on-premises environments

Research Collaboration
- Act as the primary liaison for research computing and data across CMU's colleges, ensuring alignment with and engagement across diverse disciplinary needs
- Actively participate in the development of competitive proposals for external funding opportunities
- Consulting with stakeholders across the university and with partners at Pittsburgh Supercomputer Center, develop an operating model for leadership-class computing resources that enshrines a strategic and equitable approach to ongoing development and refresh, access and utilization, funding model, and user policy

- Collaborate with university stakeholders to identify emerging trends and technologies in research computing and data; develop strategies to leverage new technologies for research capabilities
- Establish and maintain user support mechanisms to assist researchers in effectively utilizing research-computing resources

Data Governance
- Build the capacity to support research involving controlled/restricted data
- Collaborate with the Information Security Office and Research Security Office to develop and implement policies and procedures governing the use of research computing resources, ensuring the infrastructure meets stringent security and compliance standards
- Collaborate with campus stakeholders to develop a data collection management and governance structure that supports faculty and researchers by providing data collection services and consulting across the full data lifecycle—from creation to long-term preservation and access, including protected health data and other forms of controlled data.
- Ensure the application of best practices in data management and sharing, including promoting the adoption of the Findability, Accessibility, Interoperability, and Reusability (FAIR) principles to enhance the transparency and accessibility of scientific results

Competencies and Qualifications

This leadership position requires proven management and strategic leadership skills with exemplary communication skills to lead research computing development and coordination across the university's colleges and programs. The AVP RCD will be an entrepreneurial domain expert with a combination of vision, organizational savvy, skill in generating resources and leading change, and the emotional intelligence to build partnerships and create alignment across organizational boundaries.

The successful candidate will bring a majority of the following qualities to the role:

Leadership and Vision
- A comprehensive grasp of current standards and emerging paradigms in high-performance computing to guide the university's investment of capital and operating funds in leadership-class computing
- Proven ability to recruit and lead a team in developing and implementing large-scale, cross-functional initiatives in complex, decentralized environments
- The ability to develop the business model for sustainable leadership-class computing and manage a complex budget comprising multiple funding sources and time horizons and comprising capital and operating budgets (grants, partnerships)
- The skills needed to create and lead a large-scale initiative in a decentralized academic environment by integrating existing resources and identifying and developing new ones
- Experience building sustainable partnerships across organizational boundaries including with external partners
- Ability to engage sponsors, funders, advisors, donors, and elected officials in support of advancing CMU's research computing vision
- Familiarity with and participation in the national research-computing and HPC ecosystem

Technical Acumen

- Broad knowledge of deployment and management of High-Performance Computing (HPC) systems, including CPU, GPU, storage, file systems, networking, visualization, job schedulers, and scientific applications
- Understanding of specific technologies relevant to HPC applications such as AI, training, inferences, simulations, digital twins, and quantum
- Experience leading the implementation and execution of research computing capabilities and day-to-day HPC systems operations
- Ability to continuously adapt and expand research computing capabilities to support computationally intensive research, emerging scientific and engineering needs from faculty and researchers, and educational activities
- Experience addressing the facilities requirements needed to support research computing infrastructures
- Demonstrated understanding of data security, compliance, and export-control standards and regulations and ability to address information security frameworks to ensure compliant research involving controlled/restricted data
- Knowledge of and experience promoting policies and processes to facilitate appropriate access, storage, use, and sharing of data

Research Collaboration

- Demonstrated ability to engage with academic researchers across a wide range of disciplines and comfort levels from midrange to super users
- Record of contributing to successful funding proposals and business-development initiatives
- Ability to manage change and implement innovative solutions involving external partnerships e.g., with industry, federal agencies, foundations, and other institutions
- Demonstrated consulting and customer-service skills to sustain engagement with faculty, students, and staff across the academic disciplines

The successful candidate must have a master's degree, with a PhD preferred, and 10 or more years of experience in research computing, with demonstrated success in leadership roles.

Organizational Context

Office for Research

Led by the Vice President for Research (VPR) Theresa Mayer, the Office of the Vice President of Research (OVPR) oversees the university-wide strategic initiatives and operational functions of CMU's $651 million (FY2024) research enterprise and associated top-ranked technology transfer and startup activities, which span the university's seven academic colleges and its more than 100 research institutes and centers. NSF and DOD are CMU's primary federal government sponsors, and CMU has diversified its funding portfolio over time, with FY2024 being a record year for industry and non-profit funding at $75 million.

The OVPR fosters an entrepreneurial climate that gives faculty and students tremendous freedom and strongly encourages the pursuit of bold ideas that translate into real-world impact. CMU is known for its innovative research, from the founding of the nation's first robotics institute in 1979 to the world's first program in engineering and public policy more than 50 years ago. The university is a pioneer in societally transformative technologies such as the wireless campus, autonomous transportation and smart infrastructure, artificial intelligence, and advanced manufacturing, among others. Research and creative expression span the arts, humanities, social sciences, science, and engineering as well as the fundamental to the applied.

Computing Services

Led by Vice President for Information Technology and CIO [Stan Waddell](#), [Computing Services – Office of the CIO](#) is the central IT organization at CMU, delivering a comprehensive and evolving portfolio of services that support the university's mission of research, education, and innovation. Through strategic leadership and a service-oriented approach, Computing Services provides essential services spanning infrastructure, enterprise applications, and beyond to enable discovery, collaboration, and operational excellence across the CMU community.

As a critical partner in advancing the university's research enterprise, Computing Services supports a wide range of core IT services, including enterprise research administration systems, identity and access management, information security and compliance, and networking and data-center services. Computing Services is home to CMU's Information Security Office (ISO), which plays a leading role in protecting university data assets. The ISO ensures compliance with emerging security regulations and best practices while enabling a secure, productive environment for cutting-edge research.

Computing Services will be an important partner in the development of the Research Computing and Data initiative, including by leveraging the relationships of trust it has developed with decentralized IT groups across CMU's schools, centers, and institutes.

Pittsburgh Supercomputing Center

[Pittsburgh Supercomputing Center](#) (PSC) is a joint computational research center with Carnegie Mellon University and the University of Pittsburgh. Established in 1986, PSC is supported by several federal agencies, the Commonwealth of Pennsylvania, and private industry and is a partner in the National Science Foundation cyberinfrastructure program. Carnegie Mellon houses several HPC Clusters, including the Tartan Research Advanced Computing Environment (TRACE), in the PSC's data center and shares staff.

PSC architects and operates a sophisticated facility that includes high-performance computing (HPC) systems, high-speed parallel filesystems, and leading-edge networking to provide university, government, and industrial researchers with access to several of the most powerful systems for high-performance computing, communications, and data storage available to scientists and engineers nationwide for unclassified research. PSC advances the state of the art in high-performance computing, communications, and data analytics and offers a flexible environment for solving the largest and most challenging problems in computational science.

Carnegie Mellon University

A member of the Association of American Universities (AAU), CMU is a global, research-intensive private university with more than 1,500 faculty, 17,000 students, more than 117,000 alumni. In 2024, U.S. News & World Report ranked CMU #21 among national universities, and Times Higher Education at #24 among world universities. CMU is home to top ranked programs in artificial intelligence, computer science, electrical and computer engineering, software engineering, cybersecurity, business analytics, quantitative analytics, and more. It is also one of a small number of academic institutions in the nation with a Federally Funded Research and Development Center (FFRDC), the Software Engineering Institute (SEI). CMU is also home to several national resources, such as the [National Robotics Engineering Center](#), the [Manufacturing Futures Institute](#), and the [Advanced Robotics for Manufacturing Institute](#). CMU's confluence of scholarly excellence, robust federal and industry partnerships, and heritage of innovation has consistently placed it among the world's most dynamic and impactful research institutions. Central to its research impact is CMU's strong track record of technology transfer and industry partnerships: over the last five years, CMU faculty, students, and alumni have launched more than 400 start-ups that together have raised more than $7 billion in follow-on funding.

After a storied history dating to the early 1900s, in 1967, the Carnegie Institute of Technology merged with the Mellon Institute, a science research center founded by the Mellon family of Pittsburgh, to become known as Carnegie Mellon University. Today, CMU is a dynamic institution that has exceptional impact in the world. Although it is among the youngest of the nation's top universities, CMU's extraordinary success emanates from its deeply held core values and a unique heritage of innovation. It is a place of creativity, pragmatism, and ambition, with a tradition of strategically focusing its efforts and resources in areas where it can lead, then pursuing those areas with startling intensity. CMU is firmly committed to academic freedom and shared governance, providing a fertile environment for faculty success. The University facilitates collaboration across its seven schools and colleges through organizational mechanisms and incentives, such as numerous joint appointments and a dedication to recognizing contributions outside one's main field.

The University is known for its distinctive culture, which champions interdisciplinary inquiry and collaborative efforts in a technology rich environment. With more than a dozen degree-granting locations, as well as a growing number of research partnerships around the world, CMU is truly a global institution. CMU's global footprint fosters cooperation across borders, including from its campuses in Silicon Valley, Qatar, and Rwanda. CMU faculty are known for inspiring students to think creatively, interpret with insight, and solve major societal, scientific, and technological challenges. Current and former faculty and alumni include 20 Nobel Laureates, 79 members of the National Academies, 12 Turing Awardees, 10 Academy Award winners, 116 Emmy Award winners, and 44 Tony Award winners. Exceptionally talented students, roughly 47% undergraduate and 53% graduate, are drawn to the University's commitment to innovative education and training and its outstanding programs across its seven schools and colleges. CMU's FY 2024 revenues surpassed $1.7 billion.

CMU's unique interdisciplinary strengths that cut across AI, CS, engineering, technology, social and behavior science, design and the arts are a growing and major attraction for industry partners. Coupled with the efforts of the Swartz Center for Entrepreneurship, the University is a leader in introducing research innovations into the global marketplace and a driving force of regional

economic development. The March 2025 announcement of the university's collaboration with Google Public Sector is a recent case in point.

Carnegie Mellon University (CMU) serves as a powerful economic engine for Pittsburgh and the broader region, attracting investment from both public and private sectors. In response to growing state-level interest in data center-driven economic development, particularly within Western Pennsylvania's favorable landscape of affordable energy, available land, and existing infrastructure, CMU is actively exploring its needs in the context of these potential public-private partnerships. The proposed regional initiative aims to establish a world-class hub for high-performance computing (HPC) in Pittsburgh—leveraging expertise from the university, the Pittsburgh Supercomputing Center (PSC), and top tier industry partners. The June 2025 announcement that Amazon Web Services will invest in new data center campuses in Pennsylvania adds to CMU's opportunities for leadership in HPC. The AVP RCD will play a pivotal role in shaping these efforts, working in close collaboration with the university's Government Relations and Business Engagement teams to align institutional priorities, secure external support, and advance CMU's leadership in research computing.

Thanks to the efforts and investments of CMU, the University of Pittsburgh, and other entities, the Pittsburgh Region has established itself as a technology hub for both startups and large corporations, including Duolingo, Ansys, Bosch, Google, Meta, Apple, NVIDIA, SAP, and the Department of Energy's National Energy Technology Laboratory. Through the Swartz Center for Entrepreneurship and the Center for Business Engagement, the OVPR drives economic prosperity in the region, nationally, and globally.

To Apply

Carnegie Mellon University has retained Opus Partners to support this recruitment. Craig Smith, Senior Partner, Ann K. Adams, Associate Partner, and Thomas Lapierre, Senior Associate, are leading the search. Confidential inquiries and nominations should be submitted by email to Thomas Lapierre at thomas.lapierre@opuspartners.net. The search process will unfold with the greatest possible attention to candidate confidentiality. Required application materials include a resume and cover letter.

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Carnegie Mellon University does not discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex, disability, age, sexual orientation, gender identity, pregnancy or related condition, family status, marital status, parental status, religion, ancestry, veteran status, or genetic information. Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state, or local laws or executive orders.

Joining the CMU team opens the door to an array of exceptional benefits available to eligible employees.

Those employees who are benefits eligible have the opportunity to experience the full spectrum of advantages from comprehensive medical, prescription, dental, and vision insurance to an enticing retirement savings program offering a generous employer contribution. You can also unlock your potential with tuition benefits and take well-deserved breaks with ample paid time off and observed holidays. Finally, rest easy knowing you are covered by life and accidental death and disability insurance.

Other perks include a free Pittsburgh Regional Transit bus pass, our Family Concierge Team to help navigate childcare needs, fitness center access, and so much more!

For a comprehensive overview of the benefits that may be awaiting you, explore our Benefits page.

At Carnegie Mellon, we value the whole package when extending offers of employment. Beyond just credentials, we consider the role and responsibilities, your invaluable work experience, and the knowledge gained through education and training. We acknowledge and appreciate your unique skills and the diverse perspective you bring. Your journey with us is about more than just a job; it's about finding the perfect fit for your professional growth and personal aspirations.