WOMEN'S HISTORY MONTH: WOMEN IN STEM & IT	FEDERAL AGENCY FUNDING OPPORTUNITIES	ARTIFICIAL INTELLIGENCE / MACHINE LEARNING	ROBOTICS / AUTONOMOUS VEHICLES	QUANTUM	CYBERSECURITY / PRIVACY	INFORMATION INTEGRITY RESEARCH & DEVELOPMENT	5G, WIRELESS SPECTRUM, NETWORKING & COMMUNICATIONS	MICROELECTRONICS	CLIMATE CHANGE / GREEN ENERGY & IT	DIGITAL HEALTH	OTHER IT RELATED	STEM / WORKFORCE & IT	STEM / WORKFORCE RESOURCES & OPPORTUNITIES

NITRD News Brief

This edition will be NITRD's last news brief in the fashion that you have come to know and love. BUT don't be disappointed because NITRD is excited to announce a new layout that will be coming out later in April. More will follow so stay tuned!

WOMEN'S HISTORY MONTH: Women in STEM & IT

Readout of Women's History Month Labor Roundtable with the AFL-CIO

...The White House Office of Public Engagement hosted a group of women labor leaders and organizers at the White House. The event was a celebration of women in labor in honor of Women's History Month and highlighted how the Biden-Harris Administration is putting women and girls at the heart of the Administration's economic agenda, and promoting and defending women workers' rights both domestically and abroad. Since President Biden took office, the economy has created nearly 15 million jobs and women have seen the lowest unemployment rate in more than five decades. President's Investing in America Agenda is prioritizing increased access in sectors where women have historically been underrepresented, like manufacturing, construction, and clean energy, and is championing equal pay and ensuring women have access to the resources they need to enter and remain in the workforce...
The White House - Mar 22, 2024

Strides in STEM: Honoring Women-Led Achievements at Our Centers of Excellence

...Throughout March, we have reflected on the impressive contributions of women across S&T in blogs spotlighting our national laboratories and our women-owned business partners. The women in various positions across America's colleges and universities are conducting cutting-edge research on topics from enhancing community resiliency to counterterrorism, emergency management, cybersecurity, aviation and maritime security. Here is a a sampling of the many innovative women we are collaborating with through the DHS Centers of Excellence (COEs), as well as through our association with the nation's Minority Serving Institutions (MSI). Their achievements will help to foster future STEM leaders for generations to come...
Homeland Security - Mar 25, 2024

Federal Agency Funding Opportunities

Applications for USDA Urban Agriculture and Innovative Production Grants Due April 9

...The U.S. Department of Agriculture (USDA) is accepting applications for USDA's Urban Agriculture and Innovative Production grants that are due April 9, 2024.USDA's Office of Urban Agriculture and Innovative Production (OUAIP) provides grants for two types of projects, Planning Projects and Implementation Projects. Planning Projects initiate or expand efforts of farmers, gardeners, citizens, government officials, schools and other stakeholders in urban areas and suburbs. Implementation Projects accelerate existing and emerging models of urban, indoor and other agricultural practices that serve farmers and communities...
USDA APHIS - Mar 19, 2024

Artificial Intelligence / Machine Learning

Consensus Adoption of U.S.-Led Resolution on Artificial Intelligence by the United Nations General Assembly

...With the adoption in the UN General Assembly of the U.S.-led resolution on Artificial Intelligence (AI), UN Member States have spoken with one voice to define a global consensus on safe, secure, and trustworthy AI systems for advancing sustainable development. This consensus resolution, developed with direct input from more than 120 countries and cosponsored by more than 120 Member States from every region, is a landmark effort and a first-of-its-kind global approach to the development and use of this powerful emerging technology. This resolution helps ensure that the benefits of AI reach countries from all regions and at all levels of development and focuses on capacity building and bridging digital divides, especially for developing countries. The United States will continue to work with governments and other partners to ensure the design, development, deployment, and use of emerging technologies, including AI, are safe, secure, and trustworthy and are directed to achieving our common goals and solving our most pressing challenges...
U.S. Department of State - Mar 21, 2024

New AI Tools Could Save Constellation Reactor Fleet Millions

...Blue Wave AI Labs successfully deployed machine learning (ML) tools at two nuclear power plants operated by Constellation, saving the company millions of dollars per reactor each year. The project was part of a $6 million effort supported by the U.S. Department of Energy (DOE) to help lower the operating costs of nuclear power plants using the latest artificial intelligence (AI) and ML technologies. Reactor operators depend on sensors to measure power generation, fuel consumption, and the overall state of the reactor with respect to operating limits. Over time, these sensors can become out of calibration and lose accuracy. During the next sensor calibration cycle, the plant operators were able to verify that sensors that were taken offline were giving incorrect readings due to miscalibration, as was predicted by Blue Wave's tool. The company estimates that the AI tools combined have saved Constellation more than $1.6 million each year per reactor by reducing fuel costs...
Department of Energy - Mar 26, 2024

Department of Homeland Security Unveils Artificial Intelligence Roadmap, Announces Pilot Projects to Maximize Benefits of Technology, Advance Homeland Security Mission

...The the Department of Homeland Security's (DHS) announced the first "Artificial Intelligence Roadmap." The roadmap details DHS's 2024 plans, including to test uses of the technologies that deliver meaningful benefits to the American public and advance homeland security, while ensuring that individuals' privacy, civil rights, and civil liberties are protected. DHS announced three innovative pilot projects that will deploy AI in specific mission areas. Homeland Security Investigations (HSI) will test AI to enhance investigative processes focused on detecting fentanyl and increasing efficiency of investigations related to combatting child sexual exploitation. The Federal Emergency Management Agency (FEMA) will deploy AI to help communities plan for and develop hazard mitigation plans to build resilience and minimize risks. And, United States Citizenship and Immigration Services (USCIS) will use AI to improve immigration officer training. The roadmap lays out DHS's initiatives in AI, describes the potential of AI technologies across the Department, and offers clearer visibility into the Department's approach to AI, while underscoring the Department's commitment to responsible utilization...
Homeland Security - Mar 18, 2024

NTIA calls for audits and investments in trustworthy AI systems

...The Department of Commerce's National Telecommunications and Information Administration (NTIA) called for independent audits of high-risk AI systems as part of a series

of recommendations in the AI Accountability Policy Report released. AI accountability policies will help AI system developers and deployers show that their systems work as intended, and can be trusted not to cause harm. The report calls for improved transparency into AI systems, independent evaluations to verify the claims made about these systems, and consequences for imposing unacceptable risks or making unfounded claims. The AI Accountability Policy Report makes eight sets of policy recommendations across three categories to accomplish these goals: Guidance, Support, and Regulations...
National Telecommunications and Information Administration - Mar 27, 2024

New AI Model Is a Leap for Autonomous Materials Science

...A new artificial intelligence (AI) model developed at Pacific Northwest National Laboratory (PNNL) can identify patterns in electron microscope images of materials without requiring human intervention, allowing for more accurate and consistent materials science. It also removes a barrier for autonomous experimentation on electron microscopes—an important component of so-called "self-driving labs." The team began with the ResNet50 AI model and a preexisting dataset of over 100,000 unlabeled electron microscopy images called MicroNet. They taught the model to divide each electron microscope image into a grid of small "chips," then instructed it to calculate the overall similarities between chips and assign them similarity scores to one another. Groups of chips that are most similar to one another are then sorted into "communities." The researchers have been applying the new model to understand radiation damage in materials that are used in high-radiation environments like nuclear reactors...
Pacific Northwest National Laboratory (PNNL) - Mar 21, 2024

USDA/NSF-Funded Researchers Lead Project to Develop AI-driven Technologies for Agriculture

...AI is making farming more efficient, sustainable and cost effective. In an effort to expand the use of AI in agriculture, several UCF researchers will work together to develop several AI-driven technologies that aim to improve the industry's field operations. The team is supported by a $2.74 million grant from the U.S. Department of Agriculture (USDA). Professor Yunjun Xu will use his expertise to develop AI methods for motion control and scheduling in agricultural robots. These autonomous ground robots are used to conduct several operations in open fields such as detecting diseases and harvesting crops. The team will integrate AI into the manipulation of agricultural robotic arms to improve the way they interact with their physical environment, and also investigate a new AI method for the sensors used in precision agriculture. The project is funded via the NIFA interagency application program in conjunction with the U.S. National Science Foundation...
UCF Today - Mar 14, 2024

AI generates high-quality images 30 times faster in a single step in NSF-funded research

...In our current age of artificial intelligence, computers can generate their own "art" by way of diffusion models. MIT Computer Science and Artificial Intelligence Laboratory (CSAIL) researchers have introduced a new framework that simplifies the multi-step process of traditional diffusion models into a single step. This is done through teaching a new computer model to mimic the behavior of more complicated, original models that generate images. The approach, known as distribution matching distillation (DMD), retains the quality of the generated images and allows for much faster generation. The performance of the DMD-generated images is intrinsically linked to the capabilities of the teacher model used during the distillation process. The research was supported, in part, by U.S. National Science Foundation grants...
MIT News - Mar 21, 2024

Robotics / Autonomous Vehicles

Army-funded researchers help robots navigate efficiently in uncertain environments

...If the robot is traversing a complex environment with many possible paths, choosing the best route amid so much uncertainty can quickly become an intractable problem. MIT researchers developed a method that could help this robot efficiently reason about the best routes to its destination. They created an algorithm for constructing roadmaps of an uncertain environment that balances the tradeoff between roadmap quality and computational efficiency, enabling the robot to quickly find a traversable route that minimizes travel time. The researchers found that their algorithm can achieve a better balance between planning performance and efficiency in comparison to other baselines, which prioritize one or the other. This research was funded, in part, by the U.S. Army Research Labs...
MIT News - Mar 14, 2024

Quantum

Stony Brook University and Brookhaven Lab Scientists "Crack the Quantum Code"

...Theorists and computational scientists at the U.S. Department of Energy's Brookhaven National Laboratory and Stony Brook University ran a series of quantum simulations to explore one of the quirkiest features of the quantum realm: entanglement. The study takes quantum back to its roots in seeking to explain the behavior of subatomic particles. Dmitri Kharzeev, at Stony Brook University, and his colleagues wanted to see if entanglement persists in jets of secondary particles — cascades of particles produced by the fragmentation of supposedly entangled particles emitted from high energy particle collisions. They developed simulations to look for correlations between particles in one jet, which revealed persistent strong entanglement, at least for short distances. The results provide a foundation for testing these predictions in nuclear physics experiments at the Relativistic Heavy Ion Collider at Brookhaven Lab...
Stony Brook University - Mar 18, 2024

Cybersecurity / Privacy

Joint Statement on Efforts to Counter the Proliferation and Misuse of Commercial Spyware

...At the third Summit for Democracy on March 18, 2024, Finland, Germany, Ireland, Japan, Poland, and Republic of Korea joined this first-of-its-kind international commitment to work collectively to counter the proliferation and misuse of commercial spyware. Commercial spyware has been misused across the world by authoritarian regimes and in democracies. The misuse of these tools presents significant and growing risks to our national security, including to the safety and security of our government personnel, information, and information systems. We therefore share a fundamental national security and foreign policy interest in countering and preventing the proliferation of commercial spyware that has been or risks being misused for such purposes, in light of our core interests in protecting individuals and organizations at risk around the world. To advance these interests, we are partnering to counter the misuse of commercial spyware...
U.S. Department of State - Mar 18, 2024

Pentagon Technology Officials Focus on Maintaining U.S. Edge

...John Sherman, DOD's chief information officer said cyberthreats continue to emerge, as seen across Asia and Europe, and network protection across DOD and defense industry networks is paramount. To address the threat, he said DOD has remained "laser focused" on implementing a zero trust cybersecurity framework. Once implemented, the zero trust framework will move the DOD beyond traditional network security methods with capabilities designed to reduce exposure to cyberattacks, enable risk management and data sharing, and quickly contain and remediate adversary activities. DOD released its strategy to accelerate the adoption of advanced artificial intelligence capabilities to ensure U.S. warfighters maintain decision superiority on the battlefield for years to come. The department aims to apply the CJADC2 approach across all warfighting domains to give warfighters the edge in deterring and, as necessary, defeating adversaries anywhere around the globe. ..
U.S. Department of Defense - Mar 22, 2024

NOAA selects system integrator for the Traffic Coordination System for Space

...NOAA announces the award of a $15.5 million contract to Parsons Corporation for system integration and cloud management services for the Traffic Coordination System for Space (TraCSS). NOAA's Office of Space Commerce (OSC) is developing TraCSS as a modern, cloud-based IT system that will provide basic space situational awareness (SSA) and space traffic coordination (STC) services to private and civil space operators. Such services are essential for global spaceflight safety and the long-term sustainability of the space environment for commercial, civil, national security and international uses. The company's role also encompasses management of cloud services, cybersecurity protection and system administration for TraCSS operations...
National Oceanic and Atmospheric Administration - Mar 18, 2024

DHS and DG CONNECT Announce Initiative Comparing Cyber Incident Reporting to Better Align Transatlantic Approaches

...The US Department of Homeland Security (DHS) and European Commission's Directorate General for Communications, Networks, Content, and Technology (DG CONNECT) announced an initiative to compare cyber incident reporting elements that will inform cyber incident reporting requirements by the US, and European Union (EU) under the NIS 2 Directive. The joint report developed by DHS and DG CONNECT, with support from their respective cybersecurity agencies, the Cybersecurity and Infrastructure Security Agency (CISA) and the European Agency for Cybersecurity (ENISA). The report identifies six main areas for comparative analysis between the DHS's report and the EU's Directive, including: (i) definitions and reporting thresholds, (ii) timelines, triggers and types of cyber incident reporting, (iii) contents of cyber incident reports, (iv) reporting mechanisms, (v) aggregation of incident data, and (vi) public disclosure of cyber incident information...
Homeland Security - Mar 20, 2024

Treasury Announces Cyber Security Cooperation Memorandum of Understanding with Finland

...The U.S. Department of the Treasury announced that it has signed a cyber security cooperation memorandum of understanding with Finland. The Memorandum of Understanding (MoU) will facilitate exchange of information on cybersecurity between the Finnish Ministry of Finance and the Treasury Department. The MoU establishes practices for sharing information about cybersecurity threats and incidents, cyber threat actors and various best practices, and is guided by the principles of voluntariness, timeliness, anonymity, and confidentiality...

U.S. Department of the Treasury - Mar 15, 2024

CISA publishes Repository for Software Attestation and Artifacts

...The Cybersecurity and Infrastructure Security Agency (CISA) announced the availability of the Repository for Software Attestation and Artifacts that software producers who partner with the federal government can use to upload software attestation forms and relevant artifacts. Software integrity is key to protecting federal systems from malicious cyber actors seeking to disrupt our nation's critical functions. This new repository will help federal agencies employ software from producers that attest to using sound secure development practices...

Department of the Navy Chief Information Officer - Mar 22, 2024

ARPA-H Joins DARPA's AI Cyber Challenge to Safeguard Nation's Health Care Infrastructure from Cyberattacks

...The Advanced Research Projects Agency for Health (ARPA-H) is joining forces with the Defense Advanced Research Projects Agency (DARPA) to expand the Artificial Intelligence Cyber Challenge (AIxCC). Cyber and ransomware attacks on America's health care systems have increased significantly in recent years, often preventing patients from receiving care and compromising their personal information. By collaborating with DARPA on the AIxCC, ARPA-H aims to spur the development of AI-enabled technology to safeguard hospitals, pharmacies, and medical devices from cyberattacks. AIxCC is a two-year competition that asks competitors to design novel AI tools and capabilities to find and fix vulnerabilities in software used in critical infrastructure. This software runs everything from transportation to water and wastewater systems, emergency services, and energy sources. At the center of this infrastructure are the health care and public health sectors, which are uniquely sensitive to disruptions in these areas...

DARPA - Mar 21, 2024

Information Integrity Research & Development

Deepfake Defense Tech Ready for Commercialization, Transition

...The threat of manipulated media has steadily increased as automated manipulation technologies become more accessible, and social media continues to provide a ripe environment for viral content sharing. The speed, scale, and breadth at which massive disinformation campaigns can unfold require computational defenses and automated algorithms to help humans discern what content is real and what's been manipulated or synthesized, why, and how. Through the Semantic Forensics (SemaFor) program, and previously the Media Forensics program, DARPA's research investments in detecting, attributing, and characterizing manipulated and synthesized media, known as deepfakes, have resulted in hundreds of analytics and methods that can help organizations and individuals protect themselves against the multitude of threats of manipulated media. With SemaFor in its final phase, DARPA's investments have systemically driven down developmental risks – paving the way for a new era of defenses against the mounting threat of deepfakes. The agency is launching two new efforts to help the broader community continue the momentum of defense against manipulated media. According to DARPA and SemaFor researchers, a concerted effort across the commercial sector, media organizations, external researchers and developers, and policymakers is needed to develop and deploy solutions that combat the threats of manipulated media. SemaFor is providing the tools and methods necessary to help people in this problem space...

DARPA - Mar 14, 2024

5G, Wireless Spectrum, Networking & Communications

NASA/DOE funds satellite data assimilation that improves forecasts of severe weather

...A technique developed by Penn State scientists that incorporates satellite data could improve forecasts — including where the most powerful winds will occur — for similar severe weather events. The researchers reported that adding microwave data collected by low-Earth-orbiting satellites to existing computer weather forecast models produced more accurate forecasts of surface gusts in Derechos that are lines of intense thunderstorms notorious for their damaging winds. The computer model is able to produce a series of forecasts that consistently emphasize the most powerful storms and strongest wind damage at where it happened. NASA and the U.S. Department of Energy provided funding

for this work....
Pennsylvania State University - Mar 21, 2024

Microelectronics

FACT SHEET: President Biden Announces Up To $8.5 Billion Preliminary Agreement with Intel under the CHIPS & Science Act

...Semiconductors were invented in America and power everything from cell phones to electric vehicles, refrigerators, satellites, defense systems, and more. But today, the United States produces less than 10 percent of the world's chips and none of the most advanced ones. Thanks to President Biden's CHIPS and Science Act, that is changing. Companies have announced over $240 billion in investments to bring semiconductor manufacturing back to the United States since the President took office. Under their preliminary agreement with the Department of Commerce, Intel has committed to work closely with workforce training providers to develop and train workers for jobs created by the investment announced today...
The White House - Mar 20, 2024

White House Office of Science and Technology Policy Releases National Strategy on Microelectronics Research

...The White House Office of Science and Technology Policy (OSTP) is releasing a new strategy to strengthen the microelectronics research and development (R&D) innovation ecosystem in America. As called for in the bipartisan CHIPS for America Act, the National Strategy on Microelectronics Research outlines key goals and actions over the next five years. The National Strategy on Microelectronics Research provides the framework for federal departments and agencies, academia, industry, labor, nonprofits, and international allies and partners to address key needs to four interconnected goals. Developed by the Subcommittee on Microelectronics Leadership of the National Science and Technology Council, this strategy leverages the historic investments in the CHIPS & Science Act to revitalize and connect with the full breadth of microelectronics R&D activities and infrastructure supported by the federal government...
The White House - Mar 15, 2024

Climate Change / Green Energy & IT

NASA Analysis Sees Spike in 2023 Global Sea Level Due to El Niño

...Global average sea level rose by about 0.3 inches (0.76 centimeters) from 2022 to 2023, a relatively large jump due mostly to a warming climate and the development of a strong El Niño. This NASA-led analysis is based on a sea level dataset featuring more than 30 years of satellite observations. The Sentinel-6 Michael Freilich mission, which launched in November 2020, is the latest in the series of satellites that have contributed to this sea level record. The data shows that global average sea level has risen a total of about 4 inches (9.4 centimeters) since 1993. Long-term datasets like this 30-year satellite record allow us to differentiate between short-term effects on sea level, like El Niño, and trends that let us know where sea level is heading. Radar altimeters have helped produce ever-more precise measurements of sea level around the world. To calculate ocean height, these instruments bounce microwave signals off the sea surface, recording the time the signal takes to travel from a satellite to Earth and back, as well as the strength of the return signal...
National Aeronautics and Space Administration - Mar 21, 2024

Digital Health

Analysis of social media language using AI models predicts depression severity for white Americans, but not Black Americans

...Researchers were able to predict depression severity for white people, but not for Black people using standard language-based computer models to analyze Facebook posts. Words and phrases associated with depression, such as first-person pronouns and negative emotion words, were around three times more predictive of depression severity for white people than for Black people. The findings from this study point to potential limitations in generalizing by highlighting key demographic differences in language used by people with depression. The results also highlight the importance of including diverse pools of data to ensure accuracy as machine learning models, an application of artificial intelligence (AI) language models, are developed. This study demonstrated that models trained on Facebook language used by white participants with self-reported depression

showed strong predictive performance when tested on the white participants. However, when the same models were trained on Facebook language from Black participants, they performed poorly when tested on the Black participants. The research represents a step forward in building more inclusive language models, but AI models must incorporate everyone's voice to make technology fair for everyone...
National Institutes of Health - Mar 26, 2024

Setting Our Sights Toward a Healthier, More Innovative, Data-Driven Future

...The preceding 2020-2025 Federal Health IT Strategic Plan promoted a modern health IT infrastructure and drove significant progress across government and industry to advance the access, exchange, and use of electronic health information (EHI). The 2024–2030 Federal Health IT Strategic Plan seeks to build upon this progress and includes an increased emphasis in areas such as public health, health equity, and artificial intelligence (AI). The draft Plan acknowledges the swift evolution of AI and increased use in health care, emphasizing the urgent need for the federal government to navigate this transformative landscape both responsibly and effectively in health and health care. The goals are divided into distinct categories, with goals 1 through 3 addressing plans to improve the experiences and outcomes for health IT users, while goal 4 is focused on the policies and technologies needed to support those users. This Plan is intended to serve as a roadmap for federal health IT initiatives and activities, and as a catalyst for activities in the private sector...
Health IT - Mar 27, 2024

Speaking without vocal cords, thanks to a new NIH/ONR-funded AI-assisted wearable device

...A team of UCLA engineers has invented a soft, thin, stretchy device measuring just over 1 square inch that can be attached to the skin outside the throat to help people with dysfunctional vocal cords regain their voice function. The new bioelectric system is able to detect movement in a person's larynx muscles and translate those signals into audible speech with the assistance of machine-learning technology — with nearly 95% accuracy. The tiny new patch-like device is made up of two components. One, a self-powered sensing component, detects and converts signals generated by muscle movements into high-fidelity, analyzable electrical signals; these electrical signals are then translated into speech signals using a machine-learning algorithm. The other, an actuation component, turns those speech signals into the desired voice expression. The research was funded by the National Institutes of Health and the U.S. Office of Naval Research...
UCLA Newsroom - Mar 14, 2024

NIH-funded research shows AI can now detect COVID-19 in lung ultrasound images

...Artificial intelligence can spot COVID-19 in lung ultrasound images much like facial recognition software can spot a face in a crowd, new NIH-funded research shows. The findings boost AI-driven medical diagnostics and bring health care professionals closer to being able to quickly diagnose patients with COVID-19 and other pulmonary diseases with algorithms that comb through ultrasound images to identify signs of disease. The AI analyzes ultrasound lung images to spot features known as B-lines, which appear as bright, vertical abnormalities and indicate inflammation in patients with pulmonary complications. It combines computer-generated images with real ultrasounds of patients. The team developed software that can learn from a mix of real and simulated data and then discern abnormalities in ultrasound scans that indicate a person has contracted COVID-19. The tool is a deep neural network, a type of AI designed to behave like the interconnected neurons that enable the brain to recognize patterns, understand speech, and achieve other complex tasks. The tool also holds potential for developing wearables that track such illnesses as congestive heart failure, which can lead to fluid overload in patients' lungs, not unlike COVID-19.
Hub - Johns Hopkins University - Mar 20, 2024

NIH-Funded Researchers Design Foundation AI Models for Use in Pathology

...Artificial intelligence is poised to transform the practice of medicine through the design and deployment of AI models that can detect, diagnose, and render prognosis for a disease more rapidly than most human physicians can. Harvard Medical School researchers at Brigham and Women's Hospital have developed two of the largest foundation models — trained on vast amounts of unlabeled data and usable in multiple clinical contexts for different purposes with minimal tweaking — to date that can be used in pathology to read, interpret, and classify microscopy slides from patient tissues. Foundation models are AI systems that can be adapted to many downstream, clinically relevant tasks. The new foundation models, called UNI and CONCH, performed well on more than 30 diagnostic tasks, including disease detection, disease diagnosis, organ transplant assessment, and rare disease analysis. UNI employs transfer learning — the use of previously acquired knowledge to new tasks — with remarkable accuracy. This work was supported by NIH...
Harvard Medical School - Mar 20, 2024

Other IT Related

FACT SHEET: Delivering on the Biden-Harris Administration's Commitment to Democratic Renewal at the Third Summit for Democracy

...President Biden launched the historic Summit for Democracy in 2021 to strengthen democratic institutions, protect human rights, and accelerate the fight against corruption, both at home and abroad. At the first Summit, approximately 100 participating governments made over 750 commitments on a wide array of deliverables, including in the areas of advancing technology for democracy, media freedom, countering the misuse of technology, and improving financial transparency, gender equity and equality, and rule of law. This year, the Republic of Korea hosted the third Summit for Democracy in Seoul under the theme "Democracy for Future Generations." During the Summit, the United States held a high-level, multi-stakeholder event on combatting the proliferation and misuse of commercial spyware, which not only threatens democratic institutions but also poses risks to global security...

The White House - Mar 20, 2024

The White House Advances Biotechnology and Biomanufacturing Leadership with the Launch of the National Bioeconomy Board

...Biotechnology harnesses the power of biology to create new services and products, which provide opportunities to grow the U.S. economy and workforce and improve the quality of our lives and the environment. This week, the Biden-Harris Administration took an important step toward realizing the potential of biotechnology for the U.S. economy by launching the National Bioeconomy Board. The Board will work with partners across the public and private sectors to advance societal well-being, national security, sustainability, economic productivity, and competitiveness through biotechnology and biomanufacturing. The National Bioeconomy Board is co-chaired by the White House Office of Science and Technology Policy (OSTP), the Department of Commerce (DOC), and the Department of Defense. The Board also includes representatives from the State Department, National Science Foundation, Department of Homeland Security, Department of Health and Human Services, National Aeronautics and Space Administration (NASA), Department of Justice, Department of Energy, Department of Agriculture (USDA) and the Office of the Director of National Intelligence...

The White House - Mar 22, 2024

NSF selects Greg Hager to head Computer and Information Science and Engineering Directorate

...The U.S. National Science Foundation (NSF) has selected Gregory D. Hager to serve as head of the Directorate for Computer and Information Science and Engineering (CISE). Hager is the Mandell Bellmore professor of computer science at Johns Hopkins University and founding director of the Johns Hopkins Malone Center for Engineering in Healthcare. His research spans many areas of artificial intelligence and machine learning, including activity recognition and detection from video data; collaborative and vision-based robotics; and medical applications of machine learning, image analysis and robotics. Hager is known for his pioneering work on the "language of surgery," which formalized the study of the process of surgery from video and motion data...

National Science Foundation - Mar 14, 2024

STEM / Workforce & IT

Under new partnership, NSF and the Army offer unique research internship opportunity

...The U.S. National Science Foundation and the U.S. Army Combat Capabilities Development Command (DEVCOM) have initiated a joint research training opportunity through the NSF INTERN program. Two DEVCOM organizations are participating: the Army Research Laboratory (ARL) and the Ground Vehicle Systems Center (GVSC). The NSF INTERN program (formally known as Non-Academic Research Internships for Graduate Students) provides graduate students with six-month experiential learning opportunities through research internships where they acquire core professional competencies and skills. The NSF-DEVCOM INTERN opportunity will support research experiences at DEVCOM that align with ARL and GVSC research competencies. These include biotechnology, energy and fuels, extreme materials, propulsion and robotics, among others...

National Science Foundation - Mar 21, 2024

DOD Develops STEM Talent Pool Through Scholarships, Internships

...The most sophisticated weapons systems, computers and other technology are important to ensuring the U.S. military keeps its competitive edge. But also important is the talent pool — both military and civilian — that helps develop that technology and keeps it running. One tool to increase STEM talent is DOD's Science, Mathematics and Research for Transformation Scholarship Program, or SMART Scholarship. In 2023, DOD handed out 468 SMART scholarships for undergraduate, graduate and doctoral studies across 24 academic disciplines critical to national security and DOD's future. One scholarship recipient benefitted from the SMART Scholarship when DOD paid for his master's degree and doctorate. Now, he is doing underwater sonar research at the Naval Underwater Warfare Center...

U.S. Department of Defense - Mar 21, 2024

AI experts challenge students at recent NSF AI Spring School

...The NSF AI Spring School was hosted by Matrix: UTSA AI Consortium for Human Well-Being as part of the NSF Partner AI Institute. The event was co-sponsored by the National Science Foundation's Neuro-Inspired AI for the Edge (NSF NAIAD) Institute led by UTSA, Duke University's NSF AI Institute for Edge Computing Leveraging Next Generation Networks (ATHENA) and the UTSA Office of Research. Neuro-inspired AI is a subfield of AI research based on the hypothesis that biological neural systems can serve as an inspiration to improve the design of AI systems. Research in this area seeks to allow AI systems to exhibit adaptive learning, operate with fewer data samples – and to design sustainable and energy efficient AI architectures. Presentations on making computing more brain-like and neuromorphic algorithms were given. Edge computing refers to computing done on edge devices such as IoT devices. These products bring computing physically closer to the user and data and can collect and process data in real time...
The University of Texas at San Antonio - Mar 16, 2024

STEM / Workforce Resources & Opportunities

R&D WORKFORCE TRAINING: FEDERAL AGENCIES' STEM INTERNSHIPS, SCHOLARSHIPS, AND TRAINING OPPORTUNITIES

...Increasing the availability of STEM opportunities is a priority in the Biden Harris Administration. To help facilitate this, the team at NITRD developed a STEM Portal that allows anyone to search for internships and other training opportunities at Federal agencies. The NITRD STEM PORTAL is a searchable database that includes a description, link, and contact information for each program listing. Government sponsored internships and training programs are competitive, but there are many Federal opportunities and the NITRD STEM Portal is here to help.
The Networking and Information Technology Research and Development (NITRD) Program - Jan 1, 2024

FEDERAL HIGH END COMPUTING INFORMATION PORTAL

...Networking and Information Technology Research and Development (NITRD) has a portal that provides information about U.S. Federal government high performance computing activities, including available computing resources; relevant publications; fellowship and training opportunities; and technology transfer, licensing, and industry engagement opportunities. The High End Computing (HEC) Interagency Working Group (IWG) agencies provide the information contained in this portal. HEC IWG agencies are involved in various Federal activities in the HEC area including R&D and providing infrastructure and application. Take a look at it!
Networking and Information Technology Research and Development - Mar 28, 2024

Attention, science fans! Naval STEM launches newest Naval Horizons Essay Contest

...The Department of the Navy's (DON) Naval STEM (science, technology, engineering, mathematics) program has gone live with the newest iteration of its popular Naval Horizons student essay contest for high school and college students. First launched in 2020, Naval Horizons is a STEM educational video series from the DON's Naval STEM Coordination Office, located at the Office of Naval Research (ONR). It is a collection of more than 55 videos highlighting scientists and engineers, including active-duty military personnel, working within the DON. Each Naval Horizons contest adds new online videos to the existing set. Students may choose to learn about any topic in the complete video collection, which covers a variety of research areas — including biotechnology, epidemiology and public health, laser sensors, machine learning, microscopy, radiofrequency and antennas, space weather and more. High school and college students are encouraged to submit an essay that explains how they're inspired by naval research and the naval workforce — and provide a futurist vision of the Navy and Marine Corps. The essay contest will close Monday, June 10, at 11:59 PM ET...
Department of the Navy Chief Information Officer - Mar 22, 2024

Note: Any mention in the text of commercial, non-profit, academic partners, or their products, or references is for information only; it does not imply endorsement or recommendation by any U.S. Government agency.

Innovation Through NITRD Coordination

Networking and Information Technology Research and Development - National Coordination Office, Washington, DC USA