NITRD News Brief

We are pleased to continue NITRD's News Brief that offers insight into the activities NITRD's member agencies are conducting to achieve the Nation's priorities through the lens of the public-facing news sources. These are divided into networking and information technology topics that have been identified as of great importance for improving Americans' daily lives.

For ease of access, under NITRD's logo, the title of each section is listed as a link to that section. The titles of the articles under the section's heading are links that provide immediate access to the news article listed. We hope you find this informative and helpful in your daily activities.

Do you know someone who would like to receive NITRD's weekly news brief? They can email NITRD's IT aficionados at nco@nitrd.gov and voilà they will receive the news brief with the cool technology articles each week!

NITRD News

NITRD and NAIIO SUPPLEMENT TO THE PRESIDENT'S FY2024 BUDGET

...The Supplement to the President's FY 2024 Budget provides an overview of the Networking and Information Technology Research and Development (NITRD) Program's $10.9 billion FY 2024 R&D budget request, a 13.5% increase over the FY 2023 budget request, and including a 19.2% increase in artificial intelligence R&D investments. With these increases, NITRD agencies are answering the Biden-Harris Administration call to focus activities, programs, and investments in all seven domains identified in the FY 2024 Multi-Agency Research and Development Priorities memo.1 Throughout the Supplement there are highlighted example programs that advance solutions within these seven domains: Preparing for and preventing pandemics; Reducing the death rate from cancer by half; Tackling climate change; Advancing national security and technological competitiveness; Innovating for equity; Cultivating an equitable STEM education, engagement, and workforce ecosystem; Promoting open science and community-engaged R&D. The National Artificial Intelligence Initiative Office (NAIIO) provides a coordinated program across the entire Federal government to harness the benefits and mitigate the

risks of AI. The mission of the NAIIO is to ensure continued U.S. leadership in AI R&D, lead the world in the development and use of trustworthy AI in the public and private sectors, and prepare the present and future U.S. workforce for the integration of AI systems across all sectors of the economy and society...
NITRD - Nov 16, 2023

FY2024 FEDERAL CYBERSECURITY R&D STRATEGIC PLAN IMPLEMENTATION ROADMAP

...The FY2024 Federal Cybersecurity R&D Strategic Plan Implementation Roadmap provides FY2024 implementation plans and it lists key Federal R&D programs that directly contribute to addressing the cybersecurity challenges outlined in the 2019 Plan. This document accompanies the NITRD-NAIIO Supplement to the President's FY 2024 Budget Request...
NITRD - Nov 16, 2023

Federal Agency Funding Opportunities

The White House Office of Science & Technology Policy Open Science Recognition Challenge: Recognizing open science stories to benefit society

...The White House Office of Science and Technology Policy (OSTP), in collaboration with federal agencies participating in a Year of Open Science, invite researchers, community scientists, educators, innovators, and members of the broader public to share stories of how they've advanced equitable open science. This recognition challenge seeks to spotlight the stories and teams behind projects that have addressed a particular challenge or advanced a solution, while embodying open science principles and practices. These stories can underscore the potential for open science to scale the benefits of discovery and innovation across every sector of our society. Entrants may submit their open science stories for recognition in one or more of the following categories: * Open science to serve communities; * Open science to advance education; * Open science to advance global solutions; * Technical advancement to enable open science; * Open science to advance innovation; * Open science to advance interdisciplinary collaboration. Submissions close on December 1, 2023.
challenge.gov - Nov 21, 2023

The FTC Voice Cloning Challenge

...Voice cloning technology is becoming increasing sophisticated due to improving text-to-speech AI. But it also poses significant risk. The FTC is running an exploratory challenge to encourage the development of multidisciplinary approaches—from products to policies to procedures—aimed at protecting consumers from AI-enabled voice cloning harms, such as fraud and the broader misuse of biometric data and creative content. The goal of the Challenge is to foster breakthrough ideas on preventing, monitoring, and evaluating malicious voice cloning. This effort may help push forward ideas to mitigate risks upstream—shielding consumers, creative professionals, and small businesses against the harms of voice cloning before the harm reaches a consumer. It also may help advance ideas to mitigate risks at the consumer level. The Challenge closes January 12, 2024 at 8:00pm EST...
Federal Trade Commission - Jun 16, 2023

U.S. Department of Energy Announces $70 Million Funding Opportunity for Rural and Municipal Utilities to Strengthen Cybersecurity

...The U.S. Department of Energy (DOE) announced a $70 million funding opportunity to enhance the cybersecurity posture of electric cooperative, municipal, and small investor-owned utilities. Managed by the Office of Cybersecurity, Energy Security, and Emergency Response (CESER), the Rural and Municipal Utility Cybersecurity (RMUC) Program's Advanced Cybersecurity Technology (ACT) Funding Opportunity Announcement (FOA) aims to fund projects in the following three topic areas: * Support investments in cybersecurity technologies, tools, training, and improvements in processes and procedures for eligible electric utilities to improve their cybersecurity posture; * Strengthen the peer-to-peer and not-for-profit technical assistance ecosystem currently serving eligible electric utilities by providing funding for technology investments; and * Increase access to technical assistance and training for eligible utilities with limited cybersecurity resources by providing funding that will broaden the scope of products and services available. The deadline for ACT 1 Prize submissions is November 29, 2023...
Department of Energy - Nov 16, 2023

DHS Announces New 24.1 Small Business Innovation Research Pre-Solicitation

...The Department of Homeland Security (DHS) Small Business Innovation Research (SBIR) Program released six additional topics for the new SBIR 24.1 Pre-solicitation, providing small businesses a chance to review the topics and ask clarifying technical questions about topic requirements over a select period of time. The DHS topics in the 24.1 SBIR Pre-Solicitation are: *Data Labeling and Curation at Scale (DLCS) for Machine Learning Algorithms *Software Defined Radio for Public Safety * Video Analysis of Drug and Human Smuggling Activities ... Small businesses have until 5:00 PM ET on December 14, 2023, to submit questions.
Homeland Security - Nov 15, 2023

HPC

NSF-funded high-performance computing leads to discovery of novel bacterial proteins from seafloor that shine light on climate and astrobiology
...Around the coasts of the continents, where slopes sink down into the sea, tiny cages of ice trap methane gas, preventing it from escaping and bubbling up into the atmosphere. The ice cage formations, known as methane clathrates, have garnered attention because of their potential to affect climate change. During offshore drilling, methane ice can get stuck in pipes, causing them to freeze and burst. The 2010 Deepwater Horizon oil spill is thought to have been caused by a buildup of methane clathrates. A NSF-funded team of Georgia Tech researchers report on a previously unknown class of bacterial proteins that play a crucial role in the formation and stability of methane clathrates. These bacterial proteins suppress the growth of methane clathrates as effectively as commercial chemicals currently used in drilling, but are nontoxic, eco-friendly and scalable. "NSF-funded high-performance computing is enabling groundbreaking discoveries that cut across scientific disciplines from biochemistry to astrobiology and beyond," said Alejandro Suarez, a program director in NSF's Computer and Information Science and Engineering Directorate...
National Science Foundation - Nov 16, 2023

Navy Works with University of California, Riverside to Advance Major Computing Breakthrough
...The Naval Engineering Education Consortium (NEEC), teamed with the University of California, Riverside (UCR), is helping further technological advancements by studying quantum computing. UCR professors and students are using predictive quantum simulations to control electrons and qubits for quantum computers. This new tool, with lots of unique paths to computing, can potentially help us solve previously difficult-to-solve problems, and allow Navy technology to have a much stronger computing base. Development in computation capabilities is crucial for advancements in today's modern world...
Navy.mil - Nov 16, 2023

Artificial Intelligence / Machine Learning

Minimizing Harms and Maximizing the Potential of Generative AI
...Decades into the social media era, it's clear that new technologies come with both upsides and downsides. Now, with the rapid growth of tools such as ChatGPT, Bing Chat, Bard and others, we have a chance to be more intentional at the outset. These tools are called generative artificial intelligence (AI) because they respond to user input or requests, such as questions, by predicting and generating content through the use of deep learning algorithms. More than a year ago, NIST started working with the AI community on a voluntary AI Risk Management Framework to help technology companies think through the ramifications of the products they are creating or launching. Our goal is to help society benefit from AI technologies, while protecting people from its harms. Thinking about how to test an AI system for not only whether it works, but also the effect it might have on individuals, communities and society — known as a socio-technical approach — is new for NIST and the research community. This technology is going to continue to evolve faster than policy can, so there needs to be a comprehensive set of guidelines that can be flexible enough to evolve as the technology changes...
National Institute of Standards and Technology - Nov 20, 2023

DHS Cybersecurity and Infrastructure Security Agency Releases Roadmap for Artificial Intelligence
...The Department of Homeland Security's (DHS) Cybersecurity and Infrastructure Security Agency (CISA) released its first Roadmap for Artificial Intelligence (AI), adding to the significant DHS and broader whole-of-government effort to ensure the secure development and implementation of artificial intelligence capabilities. CISA's roadmap outlines five strategic lines of effort for CISA that will drive concrete initiatives and outline CISA's responsible approach to AI in cybersecurity: Line of Effort 1: Responsibly use AI to support our mission. Line of Effort 2: Assess and Assure AI systems. Line of Effort 3: Protect critical infrastructure from malicious use of AI. Line of Effort 4: Collaborate and communicate on key AI efforts with the interagency, international partners, and the public. Line of Effort 5: Expand AI expertise in our workforce...
Homeland Security - Nov 14, 2023

WVU researcher funded by USDA use AI and drones to combat invasive plants by deploying insect armies
...Yong-Lak Park, professor of entomology at the WVU Davis College of Agriculture, Natural Resources and Design, is researching the efficacy of dropping natural enemy insects on invasive plants using drone technology and artificial intelligence. With a $200,000 grant from the United States Department of Agriculture's Forest Service, Park will perfect what he calls the "bug bomb." He uses a drone to detect invasive plants in areas that are not easily accessible. Park's drone uses sensors and AI to collect images and then

automatically detect invasive plants. Once the plants are detected, a 3D printed biodegradable pod filled with insects is deployed. Although the process can be costly, it's more effective than the current practice of using herbicide for plants that are easily seen and accessed...
WVU - Nov 14, 2023

$7M USDA grant will use machine learning to develop new ways to protect mushroom crops
...A $7 million from the U.S. Department of Agriculture's National Institute of Food and Agriculture will fund Penn State researchers to develop new pest management tools for mushroom crops. It is estimated 10% to 15% of mushroom crops are lost each year to pests and disease. The researchers will develop and integrate new tools and strategies with Cropsmarts, a suite of web and mobile apps. They will further develop Cropsmarts by creating a high-definition information ecosystem in which sensors of various types are deployed in mushroom growing rooms to help automate the capture of data. The team will also design new integrated pest management tools for controlling fly populations, which threaten crops by feeding on mushrooms and spreading disease. This will include using machine learning to develop a new computer-vision-based tool for monitoring phorid and sciarid flies, making fly detection more accurate and accessible to farmers...
Pennsylvania State University - Nov 16, 2023

NSF-funded technique enables AI on edge devices to keep learning over time
...Personalized deep-learning models can enable artificial intelligence chatbots that adapt to understand a user's accent or smart keyboards that continuously update to better predict the next word based on someone's typing history. MIT researchers and colleagues developed a technique that enables deep-learning models to efficiently adapt to new sensor data directly on an edge device.Their on-device training method, called PockEngine, determines which parts of a huge machine-learning model need to be updated to improve accuracy, and only stores and computes with those specific pieces. It performs the bulk of these computations while the model is being prepared, before runtime, which minimizes computational overhead and boosts the speed of the fine-tuning process. During training and fine-tuning, the model undergoes a process known as backpropagation. In backpropagation, the output is compared to the correct answer, and then the model is run in reverse. Each layer is updated as the model's output gets closer to the correct answer. ... This work was supported by the National Science Foundation (NSF)...
MIT News - Nov 16, 2023

Robotics / Autonomous Vehicles

DARPA's Subterranean Challenge competition leads to building the next generation autonomous robots to serve humanity
...One thousand feet underground, a four-legged creature scavenges through tunnels in pitch darkness. With vision that cuts through the blackness, it explores a spider web of paths, remembering its every step and navigating with precision. The sound of its movements echo eerily off the walls, but it is not to be feared – this is no wild animal; it is an autonomous rescue robot. Created by a team of University of Colorado Boulder researchers and students, the robots placed third as the top US entry and earned $500,000 in prize money at a Defense Advanced Projects Research Agency Subterranean Challenge competition in 2021. The team developed an advanced system of sensors and algorithms to allow the robots to function on their own – once given an assignment, they make decisions autonomously on how to best complete it. The team is also integrating new sensors to make the robots more effective in challenging environments. The robots excel in clear conditions but struggle with visual obstacles like dust, fog, and snow. Since completion of the Subterranean Challenge, faculty and students have been conducting follow-on research and competitions with multiple corporate and government partners, including the National Science Foundation and the United States Department of Agriculture...
CU Boulder Today - Nov 17, 2023

Quantum

NASA's Cold Atom Lab Sets Stage for Quantum Chemistry in Space
...For the first time in space, scientists have produced a quantum gas containing two types of atoms that was accomplished with NASA's Cold Atom Laboratory aboard the International Space Station. Quantum tools are already used in everything from cellphones to GPS to medical devices. The Cold Atom Lab can now study not only the quantum properties of individual atoms, but also quantum chemistry, which focuses on how different types of atoms interact and combine with each other in a quantum state...
National Aeronautics and Space Administration - Nov 16, 2023

US Air Force Office of Scientific Resarch funds project to optimize silicon for quantum computing

...Quantum computers harness quantum mechanics to perform computations and solve problems beyond the capabilities of classical computers. In the quest to build powerful quantum computers, one type of qubit has shown exceptional promise: silicon spin qubits. These qubits not only have long coherence times but are also compatible with advanced semiconductor manufacturing techniques. To overcome the challenges, the US Air Force Office of Scientific Research (AFOSR) has awarded more than $6.7 million to a multidisciplinary team of experts in materials characterization and modeling, silicon fabrication, and quantum experiments. AFOSR funds high-risk basic research that has the potential to profoundly impact the nation's technological progress, in areas including the development of stable and powerful quantum computers.
University of Rochester School of Nursing - Nov 17, 2023

5G, Wireless Spectrum, Networking & Communications

Mapping science: How GIS transformed our view of the world
...Spatial data is organized using geographic information systems (GIS), computer-based tools used to store, visualize, analyze and interpret geographic data. Information about roads, topography, weather conditions, landmarks, businesses and more are organized into layers that can be combined and displayed on maps. The U.S. National Science Foundation played a central role in the technology's development and growth of the GIS-related science. In the last two years alone, NSF has awarded about 180 grants, totaling more than $83 million, to support research related to GIS — in fields ranging from geography to math, computer science, geology, anthropology and education. ... As GIS technology, science and applications continue to grow, advances in data science, open science and artificial intelligence are all leading to exciting new frontiers. Shaowen Wang, professor at the University of Illinois Urbana-Champaign, says "We've created cyberGIS capabilities guided by critical spatial thinking about complex and diverse scientific problems, cutting across social and natural sciences such as real-time mapping, floods, emergency response and also coupled human-natural problems that involve interdisciplinary models," Wang and his collaborators established I-GUIDE, an NSF-supported, cross-disciplinary institute, to bring data-intensive geospatial analysis to bear on sustainability issues. The use of AI to synthesize spatial data also presents opportunities and challenges, along with the creation of digital twins...
National Science Foundation - Nov 15, 2023

NASA's Deep Space Optical Comm Demo Sends, Receives First Data
...NASA's Deep Space Optical Communications (DSOC) experiment has beamed a near-infrared laser encoded with test data from nearly 10 million miles (16 million kilometers) away. This is the farthest-ever demonstration of optical communications. The tech demo achieved "first light" in the early hours of Nov. 14 after its flight laser transceiver – a cutting-edge instrument aboard Psyche capable of sending and receiving near-infrared signals – locked onto a powerful uplink laser beacon transmitted from the Optical Communications Telescope Laboratory at JPL's Table Mountain Facility near Wrightwood, California. The DSOC team will now work on refining the systems that control the pointing of the downlink laser aboard the transceiver. Once achieved, the project can begin its demonstration of maintaining high-bandwidth data transmission from the transceiver to Palomar at various distances from Earth...
National Aeronautics and Space Administration - Nov 16, 2023

Trailblazing New Earth Satellite Put to Test in Preparation for Launch
...NISAR, the trailblazing Earth-observing radar satellite being developed by the United States and Indian space agencies, emerged from a 21-day test aimed at evaluating its ability to function in the extreme temperatures and the vacuum of space. Short for NASA-ISRO Synthetic Aperture Radar, NISAR is the first space hardware collaboration between NASA and the Indian Space Research Organisation. The satellite will scan nearly all the planet's land and ice twice every 12 days, monitoring the motion of those surfaces down to fractions of an inch. It will be able to observe movements from earthquakes, landslides, and volcanic activity and track dynamic changes in forests, wetlands, and agricultural lands. With thermal vacuum and compact antenna tests successfully done, NISAR will soon be fitted with its solar panels and its nearly 40-foot (12-meter) radar antenna reflector...
National Aeronautics and Space Administration - Nov 14, 2023

Microelectronics

ONR/AFOSR/NSF/DOE-funded researchers identify unexpected twist while developing new polymer-based semiconductors
...University of Illinois Urbana-Champaign researchers bring fresh insight into the development of semiconductor materials that can do things their traditional silicon counterparts cannot – harness the power of chirality, a non-superimposable mirror image. Potential applications include solar cells that function like leaves, computers that use quantum states of electrons to compute more efficiently and new imaging techniques that capture three-dimensional information rather than 2D. Using X-ray scattering and imagining, the

team found that their "slight tweaks" caused major changes in the phases of the material. The team's findings illuminate the fact that not all polymers will behave similarly when tweaked in an effort to mimic the efficient electron transport in chiral structures. The Office of Naval Research, the Air Force Office of Scientific Research, the National Science Foundation and the U.S. Department of Energy supported this research...
University of Illinois News Bureau - Nov 14, 2023

Climate Change / Green Energy & IT

Coming Soon to a Grid Near You: Clean Energy (Batteries Not Included)
...As the country decarbonizes its electric grid, as well as all cars, trucks, trains, and even airplanes, Americans will need a battery of batteries to electrify those vehicles and store power when the sun does not shine and the winds do not blow. But mining more metals to manufacture more batteries consumes huge amounts of energy and emits greenhouse gases. Plus, the Earth simply does not contain enough accessible metal for us to mine. We need another way to amass our energy storage cornucopia. A team of NREL researchers along with DOE collaborators are working to improve how the country manufactures, recycles, and reuses these powerful materials. They are investigating a relatively new way to recycle batteries, called direct recycling. With direct recycling, they can deconstruct a battery without breaking any of the metals' chemical structures. Paul Gasper, at the National Renewable Energy Laboratory, is using machine learning to rapidly examine used batteries and assess their health...
National Renewable Energy Laboratory - Nov 15, 2023

CU Boulder leads $5.9 million effort funded by DOE to combat climate change through a marine carbon dioxide removal monitoring effort
...Juliet Gopinath in the Department of Electrical, Computer and Energy Engineering is spearheading a major endeavor to combat climate change. She is leading the three-year, $5.9 million project called "SLEUTH: Spectroscopy of Oceanic Liquid Environments Using Towed Optical Sensor Heads" through the U.S. Department of Energy. The SLEUTH team is developing a system of optical underwater sensors utilizing broadband lasers and Raman spectroscopy to sense and measure dissolved carbon compounds. These sensor heads will be towed on a cable containing optical fibers attached to a Wave Glider, an autonomous boat that runs by harvesting wave and solar energy...
CU Boulder Today - Nov 14, 2023

$3M NSF grant to boost state-of-the-art solar manufacturing
...The National Science Foundation funded researchers that are working on a new breed of semiconductors, which could enable breakthroughs in solar cells and LEDs and benefit from cutting-edge manufacturing approaches. The effort combines hands-on work that improves upon the process of layer-by-layer deposition of semiconductor materials during production with an information-sharing approach that boosts cooperation between companies while protecting proprietary information and worker interests. Halide perovskites, a class of materials that has been largely developed over the past decade, represent a promising new semiconductor material that can boost solar cell efficiency from 10% to 26%. The team led by U-M will seek to incorporate "federated learning" into the process — an approach that allows multiple entities to feed test results into a predictive model that helps all parties improve their manufacturing process while protecting their trade secrets. Pooling information in this way allows for faster development progress and reduces costs. The NSF considers it a form of "cyber manufacturing," which "exploits opportunities at the intersection of computing and manufacturing with the potential to radically transform concepts of manufacturing."...
University of Michigan News Service - Nov 16, 2023

Digital Health

Climate change and Environmental Injustice as Social Determinants of Health
...The Administration's strategic approach to addressing health related social needs is captured in The U.S. Playbook to Address Social Determinants of Health (SDOH). This Playbook focuses on solutions to the gap between health and social services by expanding data access and sharing, implementing flexible funding approaches, and supporting backbone organizations. It also highlights federal programs, toolkits, and guidance that front-line workers and organizations can use to improve their delivery of health and social services. efforts to address SDOH in healthcare settings can help to protect those currently at-risk from health harms from climate change. The Office of Climate Change and Health Equity has released a referral guide for health professionals to assist health and human services providers with addressing climate-related threats to their clients' well-being. The guide includes information about current federal resources. New tools such as a National Dashboard to Track Heat-Related Illness will help public health officials provide medical aid to those most in need and support evidence-based investments in community resilience...
The White House - Nov 16, 2023

RIT researcher receives NIH funding to help design better drugs using computational tools

...Rochester Institute of Technology's Emiliano Brini received an award from the National Institutes of Health (NIH) to support his research to develop computational tools that can predict the strength of the interaction between two proteins and how drugs will modify this interaction. Using physics-based computational models in drug design is a relatively new focus and has allowed research and development to move forward more quickly. "It's a very complicated problem," added Brini. "It is a problem that machine learning and artificial intelligence are not there yet to solve, so we need other tools. This is where we come in with physics."...

Rochester Institute of Technology - Nov 15, 2023

NSF Funds a Miniature Device that Offers Peace Of Mind For Diabetics

...Researchers at Texas A&M University are working to create a fully injectable continuous glucose monitor (CGM) so small it rivals a grain of rice and can be used with an external optical reader to measure sugar levels at any given time. While CGMs have advanced over the last 25 years, current models can still be a nuisance to the user and the required upkeep may discourage use. To address this issue, two faculty members from the Department of Biomedical Engineering have received a National Science Foundation (NSF) grant to fund a multidisciplinary project to develop an injectable, grain-of-rice-sized glucose biosensor and wearable device enabling user-friendly, minimally-invasive continuous monitoring. The reserchers are designing the injected sensor's chemistry and developing the watch-type reader device. The sensor is put under the skin and analyzed using light from the watch-like device to determine the glucose concentration. Aside from its unique size and injectability, the sensor and wearable reader employ an optical sensing technology that addresses the challenges associated with biosensing for populations of darker skin tones...

Texas A&M Today - Nov 16, 2023

Other IT Related

NOAA research and technology featured at White House Demo Day

...At the recent White House Office of Science and Technology Policy event, "American Possibilities: A White House Demo Day" highlighted science and technology innovations — made possible by federal investment. Over 900 participants attended the invitation-only event, including President Joe Biden, members of Congress, government agencies, academia and industry. Morgan Zabow from NOAA Research, Rafael DeAmeller from the NOAA VizLab and Juan Pablo Hurtado (Science on a Sphere® team showcased the National Integrated Heat Health Information System's urban heat island campaigns, which aim to reduce the health impacts of extreme heat in underserved communities. Lauren Wenzel and Kalani Quiocho from NOAA's Office of National Marine Sanctuaries and Allison Fundis from NOAA Ocean Exploration's OECI partner Ocean Exploration Trust (OET) shared information about how new technologies are improving our understanding. The "mesobot," a remotely operated vessel developed by Woods Hole Oceanographic Institute, is a collaborative effort by WHOI, the Monterey Bay Aquarium Research Institute (MBARI), Stanford University and the University of Texas Rio Grande Valley and funded by the National Science Foundation...

National Oceanic and Atmospheric Administration - Nov 13, 2023

STEM / Workforce & IT

Chief Digital and Artificial Intelligence Office Launches Access to Digital On-Demand Learning Platform

...The Department of Defense (DoD) Chief Digital and Artificial Intelligence Office (CDAO) announced the launch of "Digital On-Demand" today, an initiative to accelerate artificial intelligence (AI) knowledge by providing access to the Massachusetts Institute of Technology (MIT) Horizon's library of learning resources for the DoD enterprise. The CDAO is opening the MIT Horizon learning platform to all members of the DoD military and civilian workforce providing users with flexible, mobile-friendly options to view the content. The CDAO provides this capability through Digital University, a joint venture of the U.S. Air Force and U.S. Space Force, granting straightforward access to best-in-class training content. Digital –On-Demand can be used to gain foundational knowledge of certain technologies and as an easy reference tool to provide definitions or explanations of terms and concepts. The MIT Horizon on-line platform consists of bite-sized learning assets on AI capabilities as well as on other emerging technologies, including the Internet of Things (IoT), 5G, Edge Computing, Generative AI, Cybersecurity, and Big Data Analytics...

U.S. Department of Defense - Nov 16, 2023

US Department of Labor, IPC International establish national Registered Apprenticeship program in electronics manufacturing sector

...The U.S. Department of Labor today announced that IPC International Inc., a global association of electronics industry manufacturers and suppliers, has established a national Registered Apprenticeship program to develop talent through industry standards and formal certification pathways. The agreement enables IPC to offer paid training and experiential learning opportunities to recruit, train and retrain the skilled workers needed to build critical components used in electronics systems...
U.S. Department of Labor - Nov 15, 2023

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 - Sep 20, 2023

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!
The Networking and Information Technology Research and Development (NITRD) Program - Sep 13, 2023

NIST's Summer Undergraduate Research Fellowship (SURF)

...The SURF 2024 application is open! It will close on January 31, 2024! NIST summer interns have improved MRI technology, studied medications, and more. Spend your summer with us for 11 weeks of hands-on lab experience with world-class mentors in one of NIST's six labs or other offices.
NIST - Aug 2, 2023

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