

National Aeronautics and Space Administration

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Recognizes
Representative
Eshoo

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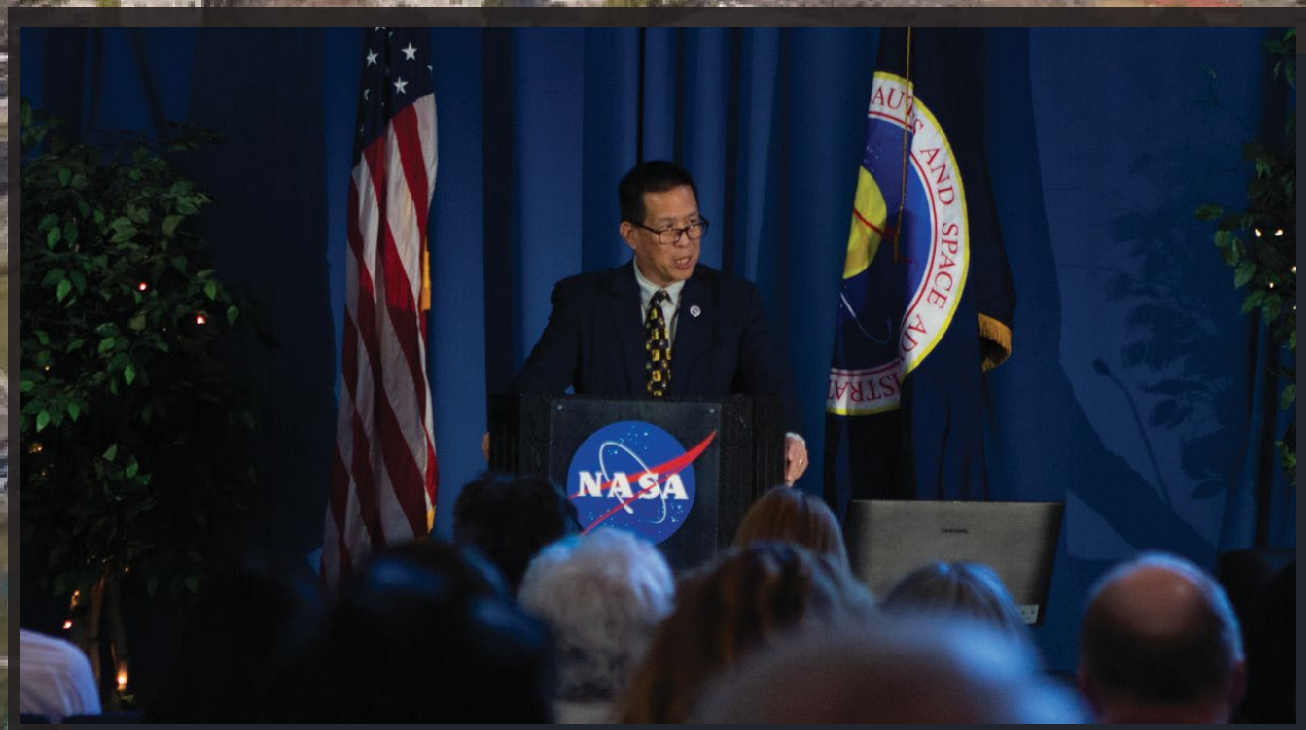
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On October 29, 2024, NASA Ames recognized Rep. Anna G. Eshoo for her 32 years of leadership in advancing innovation and STEM education.



On October 29, 2024, Dr. Eugene Tu, Center Director at NASA Ames Research Center, speaks during a special gathering honoring Representative Anna G. Eshoo for 32 years of distinguished public service and steadfast support for NASA

COVER

Dr. Eugene Tu, Center Director at NASA Ames Research Center in California's Silicon Valley, presents Representative Anna G. Eshoo with a replica of the Pioneer Plaque during a recognition event for her 32 years of public service.

NASA/Brandon Torres Navarrete

NASA Internship Fuses Academic Research and Industry Application

By CMU at NASA Ames Campus

After years of developing an AI Coach in the lab, the MechE PhD student has the opportunity to build a version for NASA design team use.

An internship with NASA gives Scotty McGee a unique opportunity to bridge the gap between her academic research and industry application. The third-year PhD student has been exploring applications of AI in academic team settings and will now bring the AI Coach to the real world.

“As an undergrad, I was drawn to the design process and project-based courses,” she explained. “This internship not only gives me the opportunity to work on an exciting NASA project with a great team of people but gives me the chance to independently build an AI Coach to help their design process.”

McGee, advised by Chris McComb, Associate Professor of Mechanical Engineering, and Jon Cagan, Professor of Mechanical Engineering, has conducted multiple human subjects studies in design courses to validate her approach with students. At NASA, she has the opportunity to build an AI Coach tailored to a NASA team’s needs and study its use over time. This experience aligns closely with her PhD work, providing valuable feedback that will inform the next steps of her research and further refine the AI Coach for broader applications.

Until now, McGee has only studied how students use the AI Coach in very controlled settings, so she believes she will gain valuable insight by observing corporate design teams at work and collecting feedback.



As part of the Convergent Aeronautics Solutions (CAS) team, McGee is also working on the Aerial Aid project, which focuses on developing drones for emergency medical services. The project’s goal is to create drones that can automatically assess the scene of an accident, determine the number of patients and their conditions, and communicate this information to EMS personnel. This enables paramedics to arrive well-prepared, equipped with the resources they need, potentially saving time and lives.

“I’m grateful for the opportunities that the NASA CAS group is providing me to study how the AI Coach can be implemented outside of the university setting. The early-stage projects in this group provide a strong platform to build from, and I’m looking forward to seeing it evolve.”

Exploring the Future of Space Innovation in Silicon Valley

By Amber Hopkins, December 2, 2024

The future of space exploration, innovation and technology is at a pivotal moment. As commercial space companies rapidly advance their capabilities, and government agencies like NASA continue to break new ground in the space economy, Silicon Valley finds itself at the heart of an exciting new ecosystem. Long known as the global epicenter of technology and innovation, the region is now setting its sights on the stars with the upcoming launch of Berkeley Space Center at NASA Research Park, a proposed, 36-acre innovation center and hub where academia, private industry and government come together to identify, incubate and launch tomorrow's technological breakthroughs.

An event held on October 18, 2024, at NASA Ames Research Center, highlighted this renewed enthusiasm. Hosted by the Silicon Valley Leadership Group (SVLG), the event brought together elected officials, tech entrepreneurs, aerospace experts and visionaries from academia, and highlighted the significant role Berkeley Space Center will play in advancing the space industry. But it also underscored something bigger—the future of space innovation and collaboration within the Bay Area.

Set to open in the coming years, Berkeley Space Center is designed to foster collaboration across sectors—bringing together space entrepreneurs, private industry, policymakers, government entities, researchers and academics. The center aims to accelerate the commercialization of space technologies, from satellite communications and space tourism to lunar exploration and beyond.

The event kicked off with brief welcome remarks by key figures in the space and innovation ecosystems. Ahmad Thomas, Chief Executive Officer of SVLG, set the tone by discussing the importance of continued collaboration between the public and private sectors in advancing space exploration. Dr. Eugene Tu, Center Director of NASA Ames Research Center, followed with a warm welcome, highlighting the rich history of innovation that Ames has fostered in Silicon Valley and emphasizing how NASA would continue to drive space exploration and research in partnership with the growing private space sector.

Astronaut José M. Hernández, followed with an inspiring opening speech highlighting his extraordinary journey from a migrant farmworker to a NASA astronaut. His story served as a powerful reminder of the transformative potential of space exploration, not just for technological advancement but for social mobility and educational opportunities as well.

As a regent at the University of California, Berkeley, Hernández spoke passionately about the need for more diversity and inclusion in the space industry, stressing that space should be viewed not as an exclusive pursuit for the elite but as an endeavor that can uplift communities from all walks of life. His message resonated deeply with the audience, reminding everyone that the future of space exploration is one that should be inclusive, diverse and representative of all people.

Following Hernández's remarks, the event transitioned into a thought-provoking fireside chat titled "Building the Future: The Historic Joint Venture Shaping Silicon Valley's Growth." Moderated by State Senator Becker, the session featured a diverse panel of speakers, including Zoe Lofgren, U.S. Representative for California's 19th District, Tim Smith, who is responsible for the project development at Berkeley Space Center, and Alex Bayen, associate provost for Berkeley Space Center.



The discussion centered around the unique collaborative environment that Silicon Valley fosters and the ways in which that environment can be harnessed to accelerate space innovation. Each of the speakers emphasized the region's historical role in driving technological advances, with particular focus on the intersection of government, academia and private industry. The panelists also discussed how Berkeley Space Center will serve as a physical and intellectual bridge between these groups. Rather than being siloed, the space industry can now thrive in an ecosystem where cross-sector partnerships can flourish.

"The presence and support of our elected officials today is a testament to the importance of the Berkeley Space Center at NASA Research Park," said Alex Bayen, associate provost for Berkeley Space Center. "By recognizing the importance of cross-sector collaboration, they are helping to ensure that the center becomes a thriving hub for innovation and discovery in space exploration."

The event's second panel, titled "Mission to Innovate: The Next Era of Space Discovery," offered a deeper dive into the cutting-edge developments currently shaping the future of space exploration. Moderated by Jaya Bajpayee, Deputy Director for Exploration Technology at NASA, the panel featured Dr. Nelson Pedreiro, Vice President and Chief Engineer at Lockheed Martin Space, and Abhishek B. Tripathi, Director of Mission Operations at UC Berkeley's Space Sciences Lab. This session took the audience on a journey into the future of space, touching on a range of topics including satellite development, space transportation and the exploration of deep space.

Berkeley Space Center: A Catalyst for Innovation

A key focus of the event was Berkeley Space Center at NASA Research Park, a joint venture between UC Berkeley and SKS Partners. This state-of-the-art facility is poised to become a hub for cutting-edge research, education and industry partnerships. The anticipated opening of Berkeley Space Center represents more than just the launch of a new research facility, it symbolizes the dawn of a new era in space exploration, one where collaboration, innovation and accessibility will drive the next wave of breakthroughs. Whether it's developing sustainable space technolo-

gies or harnessing the power of space-based resources, the center is positioned to make a significant impact.

The event at NASA Ames Research Center served as a reminder of the enduring human spirit of exploration and innovation. It is clear that space will play an increasingly important role in shaping our world. As the space industry continues to evolve, so too will Silicon Valley's role within it. The region has long been a center of technological innovation, and with the rise of private space companies and new public-private collaborations, Silicon Valley is now a critical hub in the space economy.

"As champions of innovation, SVLG and our members are proud to support this groundbreaking project that promises to shape the future of space exploration, aeronautics, and frontier technology – right here in the heart of Silicon Valley," said Ahmad Thomas, Chief Executive Officer of the Silicon Valley Leadership Group. "This cross-sector initiative is a win-win for our region, not just in terms of promising breakthroughs across a diverse range of sectors, but also in creating 6,000 high-tech jobs that will strengthen Silicon Valley's competitiveness for decades to come."

As the event at NASA Ames made clear, the sky is no longer the limit. Silicon Valley's new innovation center and hub will propel the area to new heights, both literally and figuratively, and help to shape the future of space exploration for generations to come.





Newly Released RMV iNARTE® Certified ESD Short Courses for Space, Defense and Academia!

By Renee Mitchell, RMV Moffett Field

Since 2018, RMV Technology Group LLC, a Veteran-Owned NASA Small Business, has partnered with Exemplar Global, an American Society of Quality (ASQ) family member for international certification of Space & Defense civil servants and contractors. Under the leadership of Bob Vermillion, RMV CEO/Founder, CPP, Fellow, Certified ESD & Product Safety Engineer-iNARTE®, over hundreds of individuals have been trained for iNARTE® Certified Space & Defense courses. Exclusively developed courses by RMV, the individual breakout sessions include ESD Materials and Instrument training for packaging, handling, storage, kitting and repair of ultra-sensitive devices to meet NASA-STD-8739.6B plus relevant ANSI/ESD S20.20 and MIL-STD requirements. The upcoming onsite 5-day course (March 24-28, 2025) will be held at NASA Ames Research Center, Moffett Field, California.

The 2025 newly released iNARTE® certified short courses for comprehensive learning and lower costs are:

Course No. 001-2025 - iNARTE® Certified User/Operator Awareness Interactive & Hands-On Training™ (4 hrs)

Course Description: NASA-STD-8739.6B &

ANSI/ESD S20.20 ESD Training is designed for the User/Operator that assembles, inspects, tests, kits, repairs, stores and handles ESD circuit card assemblies and EEE Parts (ESD Sensitive Devices) or equipment containing EEE Parts sensitive to electrostatic discharges (ESD).

Proper ESD safe workstation practices, static control packaging/material handling protocols, sources of static charges and the control of electrostatic charges are presented in an interactive format brought to life by NASA's ESD Technical Authority.

Course No. 002-2025 - iNARTE® Certified Advanced & Engineered ESD Polymer Protective Packaging Training™ (2 hrs)

Course Description: R&D and Engineering Introduction to Polymers, Antistats, Carbon Bulk-Loaded, IDPs, ICPs, CNTs. Humidity Independent Polymers that afford transparency, RFID, barcode capability, ESD shielding, physical protection, anti-tampering, recyclability, plus mitigation for Counterfeit packaging are discussed with demonstrations.

Learn application specifics for Space & Defense

in harsh environments. ESD Polymer approval process for Form & Fit, JEDEC trays, Tape & Reel, Dip Tubes, Vacuum forming, Thermoforming, Prototyping and Additive Manufacturing for cost savings is discussed including ESD Test Protocols for polymer packaging and the ESD Qualification Process for paper, film and polymer trays and totes. Case histories of antistat issues for manufacturing, storage and transport with proven solutions are discussed.

Course No. 003-2025 - iNARTE® Certified Space & Defense Packaging Specialist ESD Training™ (2 days)

Course Description: Designed for personnel in the ESD Protected Area (EPA), factory, assembly, shipping/receiving, R&D, Repair Depots, In-Theatre, Warehousing and Incoming Inspection that package, assemble, inspect, test, kit, store or handle ESD Ultra-Sensitive circuit card assemblies and ESDS (ESD Sensitive Devices), EEE Parts or equipment containing ESDS. Transport of packaging by air, during Winter and California Santa Ana wind conditions is also highlighted.

Group rates apply for US Military, NASA, US Veterans and Corporate team members. This course can be tailored to a specific program under contract or to update aging packaging requirements for your client or supplier.

Course No. 004-2025 - iNARTE® Certified Virtual & On-Site CubeSat Developer ESD Training™ (1 Day)

Course Description: As a result of Vermillion's innovative presentations for the Cal Poly CubeSat Developer Workshop and Auburn University, a short course for ESD Compliance of materials and packaging of SmallSats has been developed for space-bound materials.

The NEW 1-day course for CubeSat Developers is intended for NASA, DoD, US Military Academies and the SmallSat industry sector to mitigate damage or failure of CubeSats after deployment. ESD requirements will

be addressed for extreme conditions and low RH from CubeSat build to deployment.

ESD/ESA electrostatic attraction and CubeSat Integrity, Equipment Standards, Reliability, Low RH ESD Testing Methods and correct usage of ESD Instrumentation and Case Studies are discussed. ESD Protected Area (EPA) Certification and Verification Measurements for NASA-STD-8739.6B, Chapter seven, ANSI/ESD S20.20 compliance and applicable MIL-STDs for ESD Assessment Practices are also reviewed to ensure more success of deployments by NASA and the DoD in collaboration with SBIR/STTR CubeSat awardees.

RMV courses are intended for Project Managers, Academia, Avionics and Quality Assurance Engineers, lab technicians, repair depots and Facility Operations where extreme environmental conditions will impact the packaging, handling, storage, transport and kitting of EEE sensitive parts for land, air, sea and space in compliance with NASA Standard 8739.6B, Chapter seven, as required by NASA for all new contracts. For the newly released short courses, please visit the website at <https://www.esdaerospacetraining.org/team-3-1> for more information or call us direct at 650-964-4792.

Since 2009, RMV is a proven resource for the Agency and is the most advanced ESD Materials and Product Qualification Testing Laboratory on a NASA site. An internationally accredited iNARTE® Training Center for Space & Defense in partnership with Exemplar Global, the iNARTE® certification with digital credentials can be added to an individual's LinkedIn or other social media profile.

For more information on the 2025 iNARTE® Certified Space & Defense ESD Engineer or Technician Training Course (March 24-28, 2025), please contact Renee Mitchell at 650-964-4792 or renee@esdrmv.com. To schedule a visit to the RMV lab, please allow 24-48 hours in advance due to NASA Visitor requirements.



WWII Women Air Force Service Pilots - WASP - at the Moffett Field Museum

By Jeff Wasel PhD, Executive Director

While the NASA community is very familiar with the pioneering strides women have made in the sciences and space, it was never an easy road, and no more so than the early 20th century, especially in the early days of aviation. Later, when the call to arms came during WWII, women answered, and yet hurdles remained in those dark days. In September 1942, after several times rejecting proposals to use qualified women pilots for flying duties, Army Air Forces Commanding General Henry H. Arnold agreed to form two groups designed to help meet the need for pilots to ferry aircraft. The Women's Auxiliary Ferrying Squadron (WAFS), led by Nancy Hark-

ness Love, enlisted already-qualified women pilots to transport training aircraft from factories to training bases.

Meanwhile, the Women's Flying Training Detachment (WFTD), led by Jackie Cochran, oversaw an intensive training program to increase the number of women who could fly for the Ferrying Division. On 5 July 1943, Arnold put Cochran in charge of all women pilots, with Nancy Love as the Executive for women pilots in the Ferrying Command. A month later, on 5 August 1943, the WAFS and WFTD merged into a single unit for all women pilots, who were rapidly extending



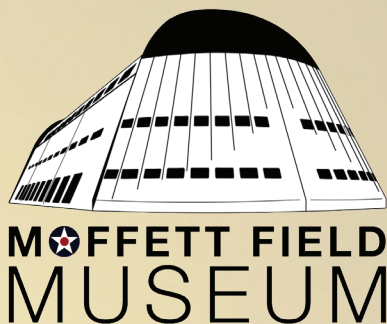
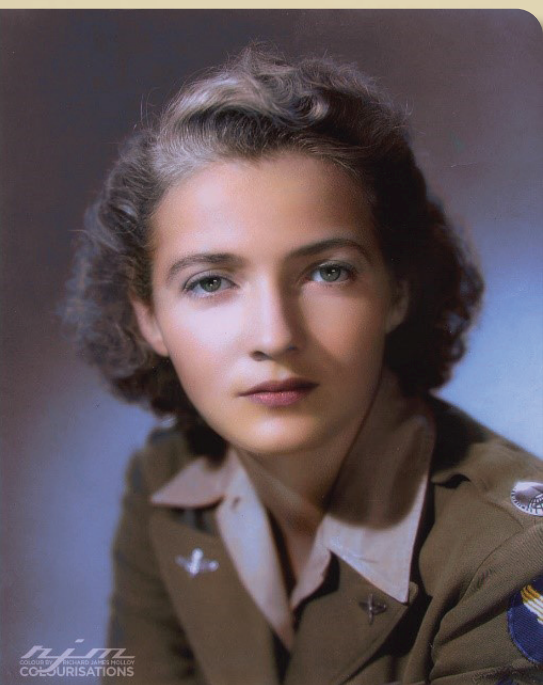
their qualifications to every type of aircraft in service. The new unified group called itself the Women's Airforce Service Pilots (WASP), with its pilots known as WASPs. These women were a remarkable group of civilian and military women pilots during World War II. Tasked by the U.S. Army Air Forces, they performed noncombat military flight test, ferried aircraft world-wide, and trained AAC cadet pilots. These trailblazing women were the first to fly U.S. military aircraft, freeing male pilots for combat roles. Although not initially military service members, their contributions were invaluable.

Finally, in 1977, after 30 years, their service was recognized, and they were granted official veteran status. Congress finally awarded the Con-

gressional Gold Medal to the WASP in 2010. They flew over 60 million miles, tested and ferried aircraft, and trained other pilots, often flying in extremely hazardous weather, in aircraft that were often untested or unreliable, as well as with few navigational aids.

The Moffett Field Museum is proud to honor these brave pioneers with a traveling exhibition on the WASP experience, and in particular, the storied career of Patricia Thomas Gladney, who amassed over 20,000 hours during a lifetime of military and commercial flying. Patricia flew every aircraft in the Army Air Corps' inventory, from the AT-6 Texan trainer, up to the mighty B-29 Superfortress. A member of WASP Cadet Class 44-8, she was eventually stationed at Williams Airfield in Arizona, serving as a test pilot and flight engineer.

The exhibit includes personal artifacts from Patricia's career, as well as WWII flight gear used by WASP pilots, along with many period photos from this unique chapter in WWII history. This exhibit will run through the end of the year. The museum is open 10am to 3pm Wednesday to Saturday, so come visit us!





From left to right: Dr. Eugene Tu, Center Director; Lisa Lockyer, Ames' Legislative Affairs Director; Meighan Haider, Director of NASA Research Park; Representative Anna Eshoo; Dr. David Korsmeyer, Deputy Center Director; Amir Deylami, Associate Center Director

NASA Ames Celebrates Representative Anna G. Eshoo's Support for Innovation and Education

By Ted Triano, Editor NRP Post

On October 29, 2024, NASA Ames Research Center in California's Silicon Valley hosted an event to honor Representative Anna G. Eshoo for her 32 years of dedicated public service. Known for her leadership in advancing science, technology, and education, Rep. Eshoo has been a staunch advocate for innovation and exploration, championing initiatives that inspire future generations of scientists and engineers.

The event highlighted her support for projects fostering collaboration between government and research institutions, which have fueled groundbreaking discoveries at NASA. During the ceremony, Ames Center Director Dr. Eugene Tu presented Rep. Eshoo with the prestigious Pioneer Plaque, a replica of the iconic messages aboard the Pioneer 10 and 11 spacecraft.

These probes, launched in the early 1970s, carried engraved messages as humanity's greeting to the cosmos, symbolizing the spirit of exploration that has defined Rep. Eshoo's career.

Dr. Tu commended her contributions, stating, "Representative Eshoo's advocacy has been instrumental in propelling advancements in technology and space exploration. Her commitment to education and innovation ensures that institutions like NASA continue to lead the world in discovery."

Rep. Eshoo has long emphasized the importance of STEM education, supporting programs like the Congressional App Challenge, which encourages students to develop coding skills and explore technology careers. Her efforts

have extended to securing federal funding for educational initiatives, expanding broadband access to underserved areas, and modernizing infrastructure to support high-tech innovation.

In her remarks, Rep. Eshoo expressed pride in the partnerships she has fostered, saying, “Investing in science and technology is investing in our future. I am honored to work alongside NASA and the brilliant minds who make Silicon Valley a global leader in innovation.”

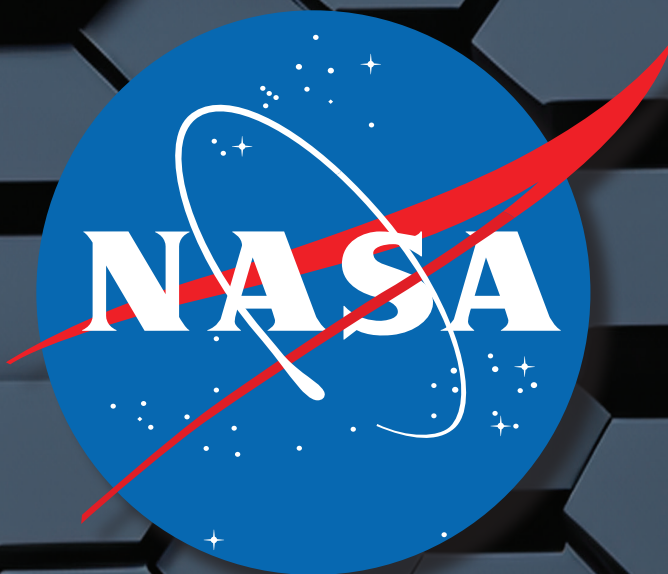
The event concluded with a tour of cutting-edge projects at Ames, showcasing the transformative impact of federal support on technological advancements. Rep. Eshoo’s dedication to fostering innovation, supporting education, and advocating for sustainable policies has left an enduring legacy in Silicon Valley and beyond.

Her leadership exemplifies how collaboration between government, research institutions, and the private sector can drive progress, ensuring a brighter future for the next generation.



Dr. Eugene Tu, NASA Ames Center Director presenting the Pioneer Plaque to Representative Anna G. Eshoo





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