

Artificial Intelligence (AI)-Generated Art Created in Space as Prelude To Celestium Global Art and STEM Project

A ground breaking data storage and edge processing tech demo aboard the International Space Station has paved the way for a new era in digital art

ST. PETERSBURG, FLORIDA, U.S., February 1, 2022 /EINPresswire.com/ -- Award-winning artist

“

Thanks to NASA and CASIS, the International Space Station is truly an incredible test bed for new technologies and now also a home for the creation of digital art”

Cecilie Waagner Falkenstrøm

Cecilie Waagner Falkenstrøm and her tech team at ARTificial Mind are advancing the next epoch of digital art with a first of its kind artificial intelligence (AI) and blockchain artwork created in space December 17th 2021.

The artwork – Celestium - is an AI and blockchain artwork to operate from space, as it orbits the Earth aboard NASA's part of the International Space Station (ISS). The artwork is developed by artist Cecilie Waagner Falkenstrøm. The idea for the artwork was initiated by Falkenstrøm and

Zibrandtsen. The technology for Celestium is developed by ARTificial Mind.

The artwork is part of a global STEAM initiative and a groundbreaking, immutable data storage, edge processing demonstration currently running aboard the International Space Station (ISS) and led by stealth start-up Lonestar, open-source leader Canonical, and leading space mission integrator Redwire Corporation (NYSE: RDW), a leader in space infrastructure for the next generation space economy.

Thanks to Canonical's Ubuntu Core, Celestium could run in a system with tight computing resources all while ensuring immutability and containment alongside its complex AI software compatibility. In addition to this, thanks to its minimal image size it was possible to use a satellite link with limited bandwidth in order to get this artwork into space.

“Something new is being made in space,” said artist Cecilie Waagner Falkenstrøm, whose interactive artworks using AI technology have earned her international acclaim. “Thanks to NASA and CASIS, the International Space Station is truly an incredible test bed for new technologies

and now also a home for the creation of digital art.” Falkenstrøm teamed up with tech-art not for profit MindFuture Foundation to help launch the project.

Harnessing data from cosmic radiation experienced aboard the ISS orbiting Earth at 17,500 mph / 27,700 kmph, the AI algorithm is seeding and mining thousands of space images and space tokens to be distributed on a blockchain. Drawing upon images from NASA's deep space photographs, the unique works of Astronaut Nicole Stott of the [Space for Art Foundation](#), and Western [artist Tamara King](#), each image is generated by the AI as one-of-a-kind and embedded as a non-fungible token (NFT). The artwork is pioneering an emerging genre at the intersection of art, space and technology.



Photo by artist Cecilie Waagner Falkenstrøm and Artificial Mind

Nonprofit partners including the Arch Mission Foundation and the Angiogenesis Foundation now have their immutable data stored successfully on the ISS as a result of this landmark collaboration.

For more information about Falkenstrøm's AI-generated artwork in space, please visit: <http://celestium.space>

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Main press contact for artwork on ISS: Artist Cecilie Waagner Falkenstrøm

Main press contact for technology demonstration: Canonical / Redwire / Lonestar

About artist Cecilie Waagner Falkenstrøm and tech team at ARTificial Mind

Cecilie Waagner Falkenstrøm is an award-winning artist who employs technology (e.g. machine learning and blockchain) to create interactive artworks. Cecilie's artworks have been exhibited internationally at venues including the Victoria and Albert Museum and Ars Electronica. Cecilie's art has been awarded international awards such as "The Lumen Prize" and the "TECHNE Award".

ARTificial Mind is an art-tech studio founded by artist Cecilie Waagner Falkenstrøm that develops

machine learning and blockchain technologies to provoke reflections about the human condition. The tech team at ARTificial Mind consists of software engineers and a data scientist with expertise within the fields of machine learning, blockchain, data structures, mathematics, and software implementation.

Contact

Artist Cecilie Waagner

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About Innovator Niels Zibrandtsen, serial entrepreneur, Innovation Hub, MindFuture.

Niels Zibrandtsen is an innovator involved in utilising information technology and decision technology to its extreme, to the benefit of humanity. He has created the vision to introduce an 18th sustainability development goal "Life with Artificials" and a debate forum Hello Humans.

Contact.

Innovator Niels Zibrandtsen,

Nz@mindfuture.ai

www.mindfuture.ai

About Lonestar

Founded by a proven team of experts from Cloud and Space verticals, Lonestar Data Holdings Inc. is pioneering the future of data at the edge.

Contact: media@lonestarlunar.com

www.lonestarlunar.com

About Canonical

Canonical is the company behind Ubuntu, the leading OS for container, cloud, and hyperscale computing. Most public cloud workloads use Ubuntu, as do most new smart gateways, switches, self-driving cars, and advanced robots.

Contact pr@canonical.com

About Redwire

Redwire Corporation (NYSE: RDW) is a leader in space infrastructure for the next generation space economy, with valuable IP for solar power generation and in-space 3D printing and manufacturing. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

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About the Space For Art Foundation and Artis Astronaut Nicole Stott

The Space for Art Foundation was co-founded by astronaut Nicole Stott, artists Ian Cion and Maria Lanas, and ILC Dover space suit engineer David Graziosi. Stott is a retired NASA astronaut, aquanaut, and now artist, speaker, and author of *BACK TO EARTH: What Life in Space Taught Me About Our Home Planet—And Our Mission to Protect It* (Hachette Book Group, October, 2021). Stott creatively combines the awe and wonder of her spaceflight experience with her artwork to inspire everyone's appreciation of our role as crewmates here on Spaceship Earth. In line with these beliefs, the Space for Art Foundation unites a planetary community of children through the awe and wonder of space exploration and the healing power of art.

Contact: info@spaceforartfoundation.org

<https://www.spaceforartfoundation.org>

About Artist Tamara King

Born and raised in Jackson Hole, Tamara King is a 4th-generation Wyoming woman and artist. She is unique among her contemporary Mountain West landscape and wildlife artists, as she is an expressionist fine art painter in the spirit of Cody native Jackson Pollack.

Contact: RichardKingArts.co

Website: <https://littledipperartstudio.com>

About The MindFuture Foundation

The Mind The Future Foundation is a not for profit art and tech organization driven by people who are passionate about investigating new possibilities and dilemmas at the cross-section between humans and technologies.

Contact: csa@mindfuture.ai

www.mindfuture.ai

About the Angiogenesis Foundation

The Angiogenesis Foundation is the leading nonprofit organization disrupting disease through angiogenesis, the process the body uses to grow new blood vessels. For more than 20 years, we have championed angiogenesis-based science to improve world health. Our mission is to improve global health by advancing angiogenesis-based medicine, diet, and lifestyle.

Contact: info@angio.org

www.angio.org

About the Arch Mission Foundation

The Arch Mission Foundation is a non-profit organization that maintains a backup of planet Earth, designed to continuously preserve and disseminate humanity's most important knowledge across time and space. The Arch Mission Foundation is preserving the knowledge and biology of our planet in a solar system wide project called The Billion Year Archive.™

Contact: press@archmission.org

<https://www.archmission.org>

More About the Tech Demo

The successful Lonestar technology demonstration included significant contributions from

Canonical and Redwire. Canonical's Edge of Network Team provided a unique kernel of Ubuntu to operate on constrained space hardware, yet could run in a hypervisor as a virtual machine. Redwire leveraged their existing computer hardware on ISS from their pioneering microgravity 3D printing capability. The combined effort broke new ground in using the art created in a virtual machine to demonstrate data storage, onboard processing, and edge of network computing as a prototype of lunar-based cloud services. Immutable data was stored on board the ISS for the test by the Arch Mission Foundation and the Angiogenesis Foundation.

More About the Artwork

The artwork "Celestium", by artist Cecilie Waagner Falkenstrøm and her team at studio ARTificial Mind, is an AI and blockchain artwork to be created in space. The artwork orbits the Earth aboard the International Space Station (ISS) with 27,700 kilometers per hour. The artwork speculates in the democratisation and decentralisation of space by enabling humans on earth to harvest near earth asteroids with resources valued in the trillions of dollars as NFTs. The artwork, which takes the form of a hybrid AI-Blockchain algorithm, uses data from the cosmic radiation that it experiences aboard the ISS, to create fungible digital tokens. The space tokens can be collected by humans on Earth, bringing the wealth of the heavens into the hands of human beings. Through the artwork, the Celestium tokens generated in space can be exchanged to one of the 600,000 real asteroids that orbit our solar system, in the form of non-fungible tokens (NFTs). Individuals are also allocated a piece of space debris equivalent to the amount that would be produced in the asteroids harvesting; as with all capitalist endeavours, follows the shared responsibility of the sustainable disposal of its generated waste products.

Each NFT has its own image generated by the AI. The AI itself is a generative adversarial network (GAN), trained on thousands of images of existing planets, stars, and nebulae across the cosmos, which it uses to generate images of its own unique celestial objects.

In order to receive the Celestium tokens, individuals must participate in a global process of creating collaborative images to be sent into space as contemporary portrayals of humanity. At the end of its time aboard the ISS, the blockchain will live on, embodying the imagery generated by the collective of mankind.

Media Officer

Lonestar Lunar

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