

Admire the design of the most award winning NASA space design competition: Harmony, full of comfort, and safety

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The US Aeronautics and Aeronautics Agency recently officially announced the design of the first prize in the space design competition for explorers on Mars: 3D-Printed Habitat Challenge, organized by the agency itself. , with bonuses amounting to \$ 500,000. That is the MARSHA (Mars Habitat) project of the New York AI AI SpaceFactory team, which excelled over 60 other teams to win the final place.

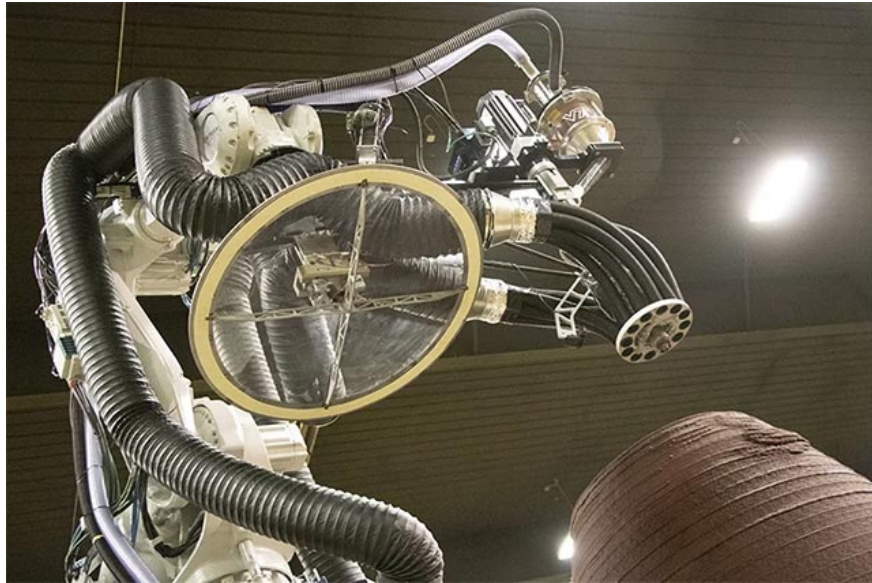
1. NASA opens the entire library of photos, videos and audio for free, anyone can see



MARSHA model of AI SpaceFactory won the first prize in 3D-Printed Habitat Challenge

According to NASA experts, MARSHA was chosen because this project not only met all basic requirements from the organizers as it was suitable for 3D printing, ensuring the requirements of composite materials, Leakage resistance, durability and resistance levels in environmental conditions in Mars, and need to be made from recycled materials as well as materials that can be found in space such as the Moon and Mars. . but also contains advantages that exceed the expectations of experts such as smart design that allow optimization of atmospheric pressure and other spatial pressures, as well as help maximize floor space. use, ensure absolute safety for pre-radiation astronauts, use biological light to reproduce light like on Earth, helps ease feelings of stress and isolation .

1. NASA 'Mars' helicopter model is almost ready for the journey to conquer Red Planet



3D printers are finishing the final stages

The entire MARSHA project is 3D printed by robots within 30 hours, with close observation of the judges in each stage.

In addition to being built with almost no human help, AI Spacefactory is also awarded the first prize for the best construction material category with a biopolymer basalt mixture - a material that possesses biodegradability, learned, recyclable and at the same time derived from natural materials found on the red planet - perfectly met all of NASA's hundred-year challenge program criteria.



Mixed basalt biopolymer

After a series of tests on resistance to pressure, smoke and collision, the material used to build MARSHA is considered to be stronger and more durable than all products of other teams, copper times are more structured than the best concrete types on earth today. 'It is very light, but extremely sturdy and durable like no other material used to make space spacecraft shells. These are extremely important basic factors for any kind of material if you want to survive in the harsh Mars environment, "NASA experts said.

1. Admire 10 priceless photos taken by NASA's Spitzer telescope



The material used to build MARSHA is considered to be strong and durable

At the same time, the design of MARSHA also proved particularly superior for research and survival activities in Mars space. AI SpaceFactory has built houses that look like beehives but upright. Instead of resisting gravity and wind, MARSHA is designed to face atmospheric pressure and the types of compressive forces acting on structures.

"Their design is light but very sturdy. These are essential properties for living spaces in space. At the same time help to optimize the resistance to atmospheric pressure and many spatial pressures. Other, as well as maximizing the floor area used," said Professor Lex Akers, chief of engineering and technology at Bradley University.

1. NASA's Internet speed rumor reaches 91 Gb / s, is it true to download movies in 1 second?



MARSHA simulation when built on Mars

Thanks to the optimal design for construction, it will only take about 30 hours to complete 3D printing of the house. The house will be divided into 4 floors, with a garage containing equipment, exploratory machinery on the ground floor, laboratory and central kitchen located on the 2nd floor, personal bedroom and floor hydroponic pond 3, and finally a common entertainment room on the 4th floor. It can be said that the prospect of a '3-star hotel' set up on Mars will no longer be an impossible task.



Shared kitchen and laboratory on 2nd floor

According to AI SpaceFactory's explanation, such a space-style layout will help promote mobility and prevent monotony. The first 'inhabitants on Mars' living in MARSHA will have to move more, as well as interact more often, thereby easing stressful psychological stress, isolation when children are one must adapt to a completely different school.

1. Please watch the first 8K video filmed in space



Private bedroom space on the 3rd floor

Each floor of the house will have at least one fixed window, placed in opposite directions, allowing astronauts to view 360 degrees of panoramic view outside, as well as making the most of the light. Natural light while not exposed to harmful radiation. This type of design helps to create the light style on Earth, thereby giving astronauts a more familiar feel. Besides, there will also be gentle arc staircases connecting from floor to floor, increasing the space for daily life, and allowing flexible movement to different areas when necessary.



The staircase system allows to move to areas more flexibly

The "Journey to Mars" initiative in 2010, with the aim of bringing people into orbit around Mars in the early 2030s. Until recently, NASA was more or less on the right track.

The living space design competition for Martian 3D-Printed Habitat Challenge explorers was organized by NASA with the help of Bradley University in Peoria, Illinois, and this is also where the final round of competition takes place. In the On-Site Habitat Competition challenge, teams are required to use automatic printers to create a 1/3 scale model and must meet a variety of material and structural requirements. NASA launched.

1. NASA launched the application to help users take selfie photos in space, invite experience



AI Spacefactory team after winning at 3D-Printed Habitat Challenge

Currently NASA is hatching plans to bring people into orbit in the early 2030s as contests like 3D-Printed Habitat Challenge show that scientists seem to be on the right track.

As for AI SpaceFactory, after winning a prize of up to \$ 500,000, the household plans to design and build TERA - a green residence space on the outskirts of New York City. TERA will be built based on the design of MARSHA.

1. NASA's "smart path" knows how to light up and activate visitor phones



TERA will be built near New York City later this year using recycled materials from the prototype Mars environment.

Please refer to the video introduction to Marsha, design the future alien research station:

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