

Technical Report: NASA's Artemis Astronauts

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The Artemis Program under NASA is an integral stepping stone toward future advancements in the realm of space exploration. Similar to previous missions under NASA, the Artemis Program features a diversified, well-accomplished group of astronauts from different backgrounds who are set on tackling various missions under the program. By looking into and analyzing the background of one of these decorated individuals, not only can key claims be made about their achievements and contributions but more general insights can be gained regarding the role of astronauts in the Artemis program and beyond. This report reviews the Artemis Program itself from a holistic viewpoint in regard to its goals, justification for them, and how they aimed to be achieved, delving specifically into the upcoming Artemis II mission. Additionally, this report will explore the life and career of one astronaut from the Artemis roster, describing their educational history, professional experience, and training to become an astronaut in relation to their future career trajectory. Based on this, the report will analyze their role with further claims on the significance of teamwork and the role's connection to possible NASA internships.

The Artemis Program is an initiative by NASA to return astronauts to the moon and continue lunar exploration for sustainable human presence. Through a more narrow lens, the specific goals of the Artemis Program are to land the first women and persons of color on the Moon, utilize new technologies and partnerships to further explore and create a long-term presence on the Moon, and prepare for Mars missions using findings. Given its past in space exploration, claiming this to be a new generation, NASA justifies these goals as necessary to demonstrate leadership for continued scientific discovery, engage in international collaboration to attract new audiences to their work, and stimulate a growing lunar colony for new industries and more jobs. To achieve these goals, NASA is developing innovative technologies like the Space Launch System Rocket, the Orion Spacecraft, and the Gateway Lunar orbiting station to

help travel to the moon, conduct research, and safely return (Deiss, 2025). Artemis II is the first crewed mission of the Artemis Program designed to send astronauts around the moon to test NASA's deep space exploration systems. The specific goals of the mission are to validate the capabilities of the SLS rocket and Orion spacecraft alongside life support systems with the crew aboard (Tuttle, 2024).

Relating to the Artemis Program, as a pilot, engineer, and rock climber, Warren Hoburg was born and grew up in Pittsburg, Pennsylvania, and is currently a NASA astronaut at the age of thirty-nine years old. He graduated from North Allegheny High School and went on to earn a bachelor's degree in Aeronautics and Astronautics from MIT and a Ph.D. in Electrical Engineering and Computer Science from UC Berkeley. Before joining NASA, Hoburg was an assistant professor at MIT, where he researched aerospace vehicle design and worked on software tools like GPkit. He also worked for Boeing on composite manufacturing and served in search-and-rescue roles. Hoburg completed two years of rigorous astronaut training that taught both basic and advanced mission technical skills and knowledge through simulations. Based on his experiences like piloting the SpaceX Crew-6 mission and also as an instrument-rated commercial pilot, Hoburg is likely to serve as a pilot on future Artemis missions where he will manage spacecraft operations (Garcia, 2025).

Warren Hoburg has a very diverse background in engineering, research, and piloting which gives him a unique skill set and makes him highly qualified for his role as a NASA astronaut. Alongside his strong academic history, Hoburg's experiences at Boeing and in search-and-rescue roles also contribute to his unique skill set and imply a strong, team-oriented mindset. However, his experiences and initiative taken through the piloting role are significant as they show his ability and familiarity with managing spacecraft operations during missions like

SpaceX Crew-6 when he went to space, making him very well-suited for the role if he is called up during the Artemis Program. As an astronaut, teamwork is crucial for mission success because, in the space habitat, astronauts must be able to work together to make sure all the various components are functioning properly, solve any problems, and support each other's well-being, given the confined environment and difficult conditions. An internship at NASA in related fields would be beneficial for working toward a career like this as it would provide earlier familiarity with NASA functions and technical systems through hands-on experiences but also introduce the teamwork and cooperative aspects of space missions, especially in high-pressure situations.

In conclusion, this report aims to explore the goals of NASA's Artemis Program while also highlighting the career and qualifications of astronaut Warren Hoburg as an example of the type of individuals involved in the success of the initiative. The Artemis Program is an important step in helping humans return to the moon to increase diversity and worldwide cooperation, explore more of the moon, and prepare for future Mars missions through technological advancement. The upcoming Artemis II mission is integral to the program as a crewed mission to validate the functionality of innovations like the SLS rocket and Orion spacecraft, providing crucial information for when moving down the line. Warren Hoburg's strong academic background in aeronautics and engineering, alongside his experience as a pilot and researcher, makes him a strong candidate for piloting a future Artemis mission. Teamwork is essential to fix any issues and ensure the mission runs smoothly, and NASA internships provide strong experience in both technical skills and working in a team-based environment, qualities exemplified by astronaut Warren Hoburg throughout his career.

References

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