Clay Watney

Ames, IA | claywat@iastate.edu | linkedin.com/in/claywatney

Education

Iowa State University, Ames, IA Aug 2026 - Present

B.S. Aerospace Engineering, College of Engineering | Primary degree

B.S. Physics, Standard Physics track | Additional degree

Salem High School, Salem, VA 2017 - 2021

Diploma. Completed a one-year mechatronics program and studied robotics, computer control, and automation.

Research Interests

Spacecraft and habitat design, planetary sampling and sample return, and resource use on the Moon and Mars. Experimental and observational interests include life-detection instruments, planetary atmospheres, and direct imaging of exoplanets with space telescopes and starshades.

Academic Programs and Honors

First Cyclones Scholar, Iowa State University 2026 - Present

STEM Scholars, Iowa State University Fall 2026 cohort

TRIO Upward Bound, including Virginia Tech programming. Member of Mu Alpha Theta and Sociedad Honoraria Hispanica in high school.

Engineering Experience

Team America Rocketry Challenge | Team Captain Aug 2018 - Spring 2019

- Organized the team's model rocket design, construction, and test flights. Used the flight results to decide with the team what to change before the next test.

Spartan Robotics | FIRST Robotics Competition Team 5724 Nov 2017 - Jun 2021

Programming team member, then Programming Team Captain in junior and senior years.

- Coordinated with mechanical and electrical teammates to test the robot, diagnose problems, and integrate autonomous routines. Mentored newer team members.
- Attended the 2018 FIRST Championship in Detroit as a first-year team member. Helped check the robot after transport and prepare autonomous behavior for matches.

Novozymes | Industrial Job Shadow

Visited three facilities during a one-day introduction to bio-industrial operations.

Certifications

Manufacturing Skills Institute Qualified May 2019

Manufacturing Technician Level 1 (MT1) Certification and Manufacturing Specialist (MS) Certificate. Earned through high-school mechatronics training.

Outreach

West Salem Elementary School | Coding Volunteer Fall 2017

Helped elementary students work through introductory coding activities on an interactive website. Invited to the one-day event through AP Computer Science.