The first time Thomas Collins’ father took him up in a plane at the Hampton Airfield it was in one of those small two person aircrafts. He was about 1,000 feet up and realized there wasn’t much between him and the ground. And he loved it.

It was moments like that, and conversations he had with his pilot-father who always encouraged him to ask questions that instilled in Collins the want to be involved with aerospace. The culmination of that passion comes on June 1 when he starts an internship with Rocket Lab, a private rocket manufacturer and launch service provider in Los Angeles California.

Collins was matched with Rocket Lab after receiving a fellowship from the Matthew Isakowitz Fellowship Program, which provides paid summer internships to exceptional college juniors, seniors and graduate students with leading commercial spaceflight companies. The fellowship also pairs each fellow with a , mentor who, in addition to guiding him through the internship, will help Collins in his search for a full-time position within the industry.

“That's one of the many reasons why this fellowship is incredible, it not only pairs you with outstanding companies but assigns you a mentor that is a has experience within the spaceflight industry.” ’ the Portsmouth, New Hampshire, resident says. “The combination of the internship, mentor, and summit allows the Matthew fellowship to be a dream come true for any space loving student.”

Collins’ internship will be centered around supporting the manufacturing engineering team at Rocket Lab Rocket Lab manufactures and operates a lightweight rocket called Electron, for high frequency dedicated launches of small satellites. The Electron’s Rutherford engine is the first oxygen/kerosene engine to use 3D printing for all primary components.. Headquartered in Huntington Beach, the company has facilities in Wallops Island, Virginia, and New Zealand, with its primary launch facility on the Mahai Peninsula, New Zealand and secondary launch facility in Virginia. The Virginia facility hopes to have its first launch during 2020.

“Currently Electron is a disposable, one-time use rocket. Rocket Lab hopes to develop reusable capabilities by catching Electron with a parachute and helicopter.” Collins says, adding that potentially makes his role of even more exciting, the changes that are possible. Rocket Lab is hoping to join SpaceX on this reusability effort, currently SpaceX is the only company with a reusable orbital class rocket.

He says the drive in rocket manufacturing now is to increase frequency and usability, so the rockets can be used for more than one launch. “If you think about it in terms of airplanes, if a plane was made to fly only from New York to LA and then you threw the plane away, no one would be able to afford the tickets.”

An engineering physics major, Collins transferred to UNH from the University of Maine after taking a summer course in Durham.

“When I saw the facilities here and how much UNH had to offer, I made the switch,” Collins says. “That was the first step professionally to my career in spaceflight, it only takes one step after another to get to your goal”.

He has been the vice president of UNH’s Students for the Exploration and Development of Space (SEDS) for the last three years since its foundation in Spring 2017. “UNH isn’t tech giant such as MIT or Virginia Tech, getting into the spaceflight industry is hard. UNH SEDS hopes to bring space loving students and the industry a little closer together.”

During his internship at Rocket Lab, the rest of UNH SEDS will be driving out to New Mexico to compete in the 2020 Spaceport America Cup competition. There, the team hopes to launch New Hampshire’s first undergraduate hybrid rocket to 10,000ft while competing against teams from around the world.

As excited as he is to start his internship, Collins is sorry to miss the Spaceport America Cup competition SEDS members will participate in on June 16 that will have teams from around the world launching the rockets they made.

NASA and the Space Race encouraged me to take my first steps,” Collins says. “I want to be a part of the team that encourages others to take theirs”

Collins says.