I started my undergraduate engineering degree at the University of Maine (UMaine). I knew the next four years would dictate the start of my career and my introduction to the commercial space industry, I couldn't afford to waste time. After three semesters, I did not see myself succeeding in the ways required to get into this industry. I needed a change and transferring to the University of New Hampshire (UNH) was my solution. Once at UNH, I lost no time joining extracurricular organizations and activities. I found my home with UNH Students for the Exploration and Development of Space (SEDS) just a few weeks after its foundation.

UNH SEDS stems from SEDS USA, a nationwide organization whose mission is to empower young people to participate and make an impact in space exploration. As the vice president for the past three years, UNH SEDS has allowed me to pursue the commercial space industry all while reinforcing the concepts covered in my engineering courses. One instance of this occurred while sitting in classical mechanics. My professor began class with “today we’ll be reviewing Tsiolkovsky’s rocket equation.” The following lecture remains to this day to be the best class I have ever attended, and since then many SEDS freshmen have received a premature dose of classical mechanics and the famous rocket equation. Instances like these are what I try to foster at UNH SEDS; an environment where regardless of your grade or major, there is always something exciting to learn about the world above.

UNH SEDS’ development was critical to UNH. UNH previously lacked an engineering competition team that incorporated all degrees and years. UNH SEDS allowed for knowledge transfer between years to be seamless, and to build a relationship between undergraduates and alumni. During the 2017-2018 school year, mastery of rocketry was a far-fetched reality, from lawn darts to lake landings, we failed in some glorious ways. I’ll always remember when my friend and I stayed in the workshop until 3 AM, finalizing our second rocket, only for it to undergo a rapid unscheduled disassembly during flight. It never felt like work. Time and time again, we marched out to our home-made launchpad and flew 9 rockets. This year captured the spirit of the club at its finest, a few college kids from New Hampshire trying to build rockets. Lessons learned and modifications made, we felt strong in our understanding and looked forward. The 2018-2019 school year brought in the development of Runaway, our hybrid engine utilizing HTPB rubber and nitrous oxide. Stepping outside of our comfort zone, we challenged ourselves by attempting four hot-fire tests, gaining insight on our engine’s performance and the capabilities it would be able to achieve the following year. 2019-2020 marks my senior year. As the vice president and frame lead, I manage the student body of the organization and work with every engineering team to design the best rocket frame possible. SEDS and space are my passion, so having the ability to integrate each team while simultaneously work with undergraduates and new members is a huge honor. With less than 10 months until the 2020 Spaceport America Cup, it’s now or never for New Hampshire’s first undergraduate hybrid rocket.

My professional growth over the past three years have been solely guided by SEDS. Traveling to the past two SpaceVisions and spending a week at the 2019 IAC, SEDS has fueled my development and I am grateful for every person I have met along the way. Six months from now I’ll hopefully be joining a new team within the commercial space industry, where the same mission exists as before: to inspire the next generation of space loving enthusiasts while improving life on and off earth. I can only hope that I have opened space for one of the undergraduates who will carry UNH SEDS forward.

Commercial space capitalizes on man’s innate desire to explore. It captures the minds of the youngest generation and the greatest engineering minds alike, inspiring entrepreneurs to drive the market faster and further than the government's capability. When considering its sphere of influence, look no further than your phone or the exercise equipment at the gym because space is interwoven into so many facets of our lives. Personally, nothing could generate a more fulfilling life’s work than to be with a team of people who are driven by the challenges space presents.

Why are you interested in working for Ursa Major Technologies?

Ursa Major Technologies’ commitment to propulsion and the production of high-quality are what initially intrigued me about the company. Looking deeper, I found a small team of people who are devoted to their work and the challenges presented before them. This is what solidified my interest in your company; I want to become a part of a team who face space’s challenges with excitement and passion because personally, nothing is more fascinating than rocketry.

In an interview with MontyTV, Joe Laurienti said “by selling the most important part of the rocket… the engines, we’re able to reduce our customers…time to market.” This struck me as vital to Ursa Major Technologies because each company must serve a purpose within its industry. Outside of purpose, this comment emphasized your commitment to accelerating the commercial space market and providing essential components for small rocket companies. In conclusion, these comments and characteristics of Ursa Major Technologies are why I am interested in your company.