1. In **350 words or less**, please describe the type of company and internship work assignment you would prefer and why?

10 years ago, I stared at the television screen and saw rocket boosters light off for the first time, as my eyes widened it ignited a love that would dictate the next decade of my life. I live my life as if I have the shadow of my 11 year old self by my side, I want to pursue my vocation such that I never fail to reach the imagination and goals that I set for myself so long ago. The company that I would prefer to work for would be one that allows me to fulfil every aspect of that love for space, exploration, and discovery. As I have followed along my path, areas such as vehicle integration, propulsion, and spacecraft design have become highlighted and dictated my focus. This focus has not wavered and can be seen in my experience though my collegiate career. Starting in the Nuclear Particle Group as an undergraduate researcher I gained experience in scientific research and team-oriented operations. Transitioning to an internship at TURBOCAM International where I acquired knowledge relating to the inner workings of a private aerospace engineering company. All the while I’ve devoted my enthusiasm for spaceflight through the University of New Hampshire Students for the exploration and Development of Space. Where I’ve served as Vice President for the past three years alongside previous Matthew Isakowitz Fellow, Charlie Nitschelm. When reflecting upon my work, nothing would be greater than saying I was able to help a team progress human development, in space, on earth, and along our joined journey to the stars.

I have had the pleasure of knowing exactly where and what I want to spend my efforts on throughout my life. Other areas of interest have come and gone but my drive for engineering and STEM has been unwavering. If I am granted a spot in the Matthew Isakowitz Fellowship Program, I will bring that focus and commitment to spaceflight and to my host company. Ensuring day in and day out, that I work towards the mission of the company and the final frontier.

\*Talk a little more heart into it\*

\*Experience seems forced\*

If accepted into the MIFP, I would be looking to be paired with a company that is looking for a student to rise to the challenge. I went into the commercial spaceflight field because I knew it would be challenging and thus, equally rewarding. I want to invest in a company that see’s the value of everyone's work and allows their interns to prove their worth.

As for the internship work, there are areas of spaceflight that fascinate me the most, rocket integration, propulsion engineering, and systems operations and optimization. Nevertheless, this is not to distract myself from the fact that my passion lays in aerospace and spaceflight, no matter what specific task I preform, if it can be seen to progress human development towards space, it will be fulfilling.

I am looking to work for a company that will have a real impact on the world, encouraging and inspiring people through allowing human spaceflight to be accessible to more than just the select few.

I chose to go into the commercial spaceflight field because I knew it would be challenging and thus, equally rewarding. My determination to work towards these goals and their alignment with this internship make me an ideal candidate.

Over my collegiate career, I have worked towards personal and academic success, not only for myself, but also those around me. A good friend of mine and I have built an engineering organization within my university that has grown to over 40 members with the focus on the development of aerospace and commercial spaceflight. As the Vice President of UNH Students for the Exploration and Development of Space, I have gained valuable experience developing and designing our hybrid rocket engine and managing the design of the vehicle architecture. In depth FEA and SOLIDWORKS has been a required to create a beautifully designed rocket. Outside of UNH SEDS, I am an Engineering Intern at TURBOCAM International where I develop data analysis software and work with 5 axis machining.

My devotion and passion for space has not wavered over the course of my life, and I can only hope that my next steps are with Matthew Isakowitz fellowship

1. Please answer **ONE** of the following essay questions in **350 words or less**:
   * What will be the next giant leap in space technology from the private sector and why?
   * You are testifying before Congress for a hearing focused on the biggest barriers for the commercial space industry. What would be your opening remarks?
   * Elon Musk, in a discussion with our 2019 Fellows, stated that starting a company is like “eating glass and staring into the abyss.” Thankfully, you have the stomach for this kind of business. What start-up idea would drive you into starting a business and why?

Thank you chairwomen Kendra Horn and ranking member Brian Babin, thank you for the opportunity to testify today. As we sit here today, there are more than 21,000 objects larger than 10cm orbiting the Earth, not to mention the 500,000 bits of space debre that fall between 1 and 10 cm. These objects are traveling at bewildering speeds turning fore say, a BB, into an undetectable projectile with a kinetic energy far greater than modern bullets. On the bright side, small debre burns up once it re-enters through the atmosphere, and larger objects can be tracked, simulated and ground impacts predicted. Now, predicted, not controlled, not modified, simply predicted. As you can see, space debre poses a threat for the space industry on both fronts, in the sky and on land. When launching costs rise to the tone of $23,000 per kilo, its vital to consumers, companies, and all those involved to protect their assets.

In a recent industry study, I asked 35 professionals what the biggest challenges and barriers in the industry were currently, and in the foreseeable future. Of the responses, 60% + mentioned space debris and orbital debris disposal as one of their top issues. These professionals are ingrained in our industry, from a Manager of Business Development at one of the largest Defense contractors, to a CEO & System Engineer at a Korean based small orbital launch company. Their input is invaluable and as one professional commented on space debris, “It’s like driving across a vast desert with your eyes closed, maximum car speed, with a lot of other cars driving there too, and being told to turn right, or turn left, and the person giving the direction only seeing a very small fraction of things you can run into.  Never stopping or slowing down.” These dangers exist in every facet of space, from life support systems on the ISS, to precision equipment on revolutionary space startups satellites. Space debris poses as one of the most formidable dangers, and barriers to the commercial space industry. Thank you, and I look forward to answering your questions.

\*Add statistic about commercial cost\*

\*Add comment about how its commercial space’s responsibility\*

Ref.

[1]. <https://www.universetoday.com/42198/how-many-satellites-in-space/>

[2]. <https://en.wikipedia.org/wiki/List_of_United_States_House_of_Representatives_committees>

[3]. <https://www.bloomberg.com/graphics/2018-rocket-cost/>

1. In **800 words or less,** please answer the following: Why are you excited and passionate about commercial space and your current or future role in it, and why are you a strong candidate for this Fellowship?

A good friend of mine and I have built an engineering organization within my university that has grown to over 40 members with the focus on the development of aerospace and commercial spaceflight. As the Vice President of UNH Students for the Exploration and Development of Space, I have gained valuable experience developing and designing our hybrid rocket engine and managing the design of the vehicle architecture. In depth FEA and SOLIDWORKS has been a required to create a beautifully designed rocket. Outside of UNH SEDS, I am an Engineering Intern at TURBOCAM International where I develop data analysis software and work with 5 axis machining.

**In a brief statement, in your own words, please describe why you are an ideal candidate for this position.**

I am looking to work for a company that will have a real impact on the world, encouraging and inspiring people through allowing human spaceflight to be accessible to more than just the select few.

I chose to go into the commercial spaceflight field because I knew it would be challenging and thus, equally rewarding. My determination to work towards these goals and their alignment with this internship make me an ideal candidate.

Over my collegiate career, I have worked towards personal and academic success, not only for myself, but also those around me. A good friend of mine and I have built an engineering organization within my university that has grown to over 40 members with the focus on the development of aerospace and commercial spaceflight. As the Vice President of UNH Students for the Exploration and Development of Space, I have gained valuable experience developing and designing our hybrid rocket engine and managing the design of the vehicle architecture. In depth FEA and SOLIDWORKS has been a required to create a beautifully designed rocket. Outside of UNH SEDS, I am an Engineering Intern at TURBOCAM International where I develop data analysis software and work with 5 axis machining.

My devotion and passion for space has not wavered and I can only hope that my next steps are with The Spaceship Company.