Eric **Crisp**

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Dear A Company's Hiring Team,

My career is motivated by a passion to help solve impactful, ethical engineering challenges. Until recently, that challenge was combating pollution via more efficient combustion-based engines ranging from optimizing combustion chemistry all the way to developing performance-based engine control software. After reevaluating the current engineering landscape and associated challenges, a small subset of the problem space resonated deeply with my values and interests. Since then, I have been navigating my career with increasing confidence towards becoming an active member in the ethical artificial intelligence and machine learning community. In my complete commitment to this transition, I left the aerospace industry to pursue a Masters of Science in Data Science with a concentration in AI/ML from the University of Pennsylvania to develop the skills and knowledge necessary to contribute towards ethical solutions in AI/ML.

As with all cutting-edge frontiers, AI/ML presents a similar challenge to that of optimizing combustion-based machines in that to do so, you must operate at the intersection of multiple independent, technical domains. While my time as an aerospace engineer led me to gain experience in some of these domains, including computer science and applied math, my time at the University of Pennsylvania is really where I began identifying and filling in existing gaps. For example, by taking the time to thoroughly understand how and why data structures and algorithms enable efficient software development paradigms, it paved the way to understand several fundamental bottlenecks and design decisions in modern AI/ML architecture. However, a theoretical understanding is only part of the journey. Being able to implement, work with, and utilize the theory to create a product or generate insights takes nothing short of getting your hands dirty. To that end, I keep up to date with the research coming out in the industry, have completed several relevant projects in the data science and AI/ML space, and have even developed a transformer-based neural network from scratch.

While my technical skills in this field may be in development, there are many aspects from my years in aerospace that bring unique value to the table. During my first year at Firefly Aerospace, I collaborated with two other engineers to design, build, and test a new engine that would go on to successfully land on the moon in 2025. Throughout this project, I gained invaluable experience not only in various technical skills but also in all aspects of the product development cycle, developing relationships with and communicating results to stakeholders, balancing trade studies with both decisiveness and justification, and seeing an open ended technical project to competition. On day one at Blue Origin, I was individually tasked with turning a large-scale, hypothetical business idea into a reality; within four months, I had developed the RTM (real time model) - a software product that achieved the stated goal and continues to excel to this day. As the scope accelerated and the product value grew, I had the opportunity to lead engineers, manage the product development, and develop new technical and non-technical skills along the way.

Among the most valuable assets I bring to the table is not a skill at all, but an intangible quality - genuine passion. It's as simple as this, to me, as ubiquitous as AI is and will continue to become, the impact on the lives of countless impressionable individuals across all walks of life are inherently dependent on the quality of the products released and therefore need to be unequivocally ethical, safe, and robust. This passion is what motivated me to leave my career in aerospace and pursue a new career; one that hopefully starts right here, at A Company, as an Artificial Intelligence SWE.

Sincerely,

Eric Crisp