

To Whom It May Concern,

I appreciate you taking the time to review my employment application with Gloyer-Taylor Laboratories. When I learned about GTL, I immediately applied because of my passion for research and development in aerospace technologies. Furthermore, my research interest in launch vehicle and spacecraft propulsion systems aligns perfectly with the scope of work defined for the Aerospace/Mechanical Engineer II position.

Outside my job, I often design new propulsion concepts. One example is to harness energy from rocket fuel reaction and expansion to drive an auxiliary system that ionizes the exhaust flow and further accelerates it, improving specific impulse on a rocket. This leads me to research about combustion chemistry, ion engines, and plasma physics to study the feasibility of the concept. Another area I have explored is magneto-fluid dynamics, in particular mini-magnetospheric plasma propulsion (M2P2). M2P2 injects plasma to generate and inflate a magnetosphere that transfers momentum from the solar wind to the spacecraft. M2P2 can also provide radiation shielding, potentially drastically reducing mass in a spacecraft.

As space commercialization accelerates in the future, space systems will become more sophisticated, with greater power requirement. I believe nuclear technology is indispensable in delivering that power efficiently. I want to be one of the pioneers and help GTL capitalize on the immense growth potential in the space industry. My experience with nuclear engineering can help GTL internalize some costs of research and development related to radiation shielding, nuclear power, and more.

The variety of work for a GTL engineer, from R&D and commercial projects to conceptual design and business development, is very exciting to me. I am confident my versatility, diverse work experience, and aero-nuclear background will be valuable to your company. I am eager to begin a new chapter in my career with GTL and look forward to discussing employment opportunities with you. Thank you again for your time. Please feel free to reach out if you have any questions.

Sincerely yours,

Francis Lam

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