To Whom It May Concern,

My name is Matthew Li, and I am a freshman studying mathematics at Stanford University. Before attending Stanford, I completed two years of coursework at the University of North Texas, where I maintained a 4.0 GPA. My prior studies included subjects such as partial differential equations, data structures, and quantum mechanics. My academic interests include mathematical problem solving, building physics simulations, and theoretical physics research. Currently, I am seeking an internship where I can study research problems using machine learning, physics, and mathematics.

I have two years of research experience in computational physics under the supervision of Dr. Arkadii Krokhin and the National Science Foundation. My work involved using Fourier analysis, finite element methods for partial differential equations, and vector calculus to demonstrate the existence of momentum gaps in the band structure of a specially designed semiconductor.

During my research, I gained computational skills by implementing parallel processing in my models, developing a machine learning algorithm for the classification of eigenvalues, and writing Bash scripts for the Lonestar6 supercomputer. As a result, I am experienced in using Python for scientific applications.

I will be the first author on a paper that will be published in the Journal of the Acoustical Society of America this Fall. Additionally, I recently won the prize for best undergraduate physics presentation when I presented my work at the 2024 National Science Foundation Emerging Researchers National Conference in Washington, D.C.

I would appreciate the chance to discuss any internship opportunities. Please contact me at mattli@stanford.edu if this interests you.

Best,
Matthew Li