National Renewable Energy Laboratory March 30, 2023
Concerning: Graduate Summer Intern –Learning-based Optimal Control for Improving Grid Resilience

To whom it may concern,

I am currently a PhD Candidate in the University of Arizona's Applied Mathematics program, applying numerical methods to simulate gas flows across networks - with the eventual goal to create a high-fidelity coupled simulation/optimization framework for gas and energy grids. I am particularly interested in the interaction between the coupled dynamics and network topology as energy generation transitions from traditional, concentrated, deterministic sources to distributed, stochastic renewables.

Before entering graduate school, I worked for 3 years writing algorithms in an embedded environment using C/C++. This experience was invaluable, and taught me that I thrive at the interface between modeling of complicated dynamical systems and efficient implementations of algorithms to simulate them.

As I near the end of the PhD, I seek to enrich my knowledge of power system dynamics, and create connections that will propel me into a career in the field of energy modeling.

NREL seems a natural fit for my skillset and curiosity, as a leader in energy system modeling, especially the energy transition. While I am currently unexperienced in power-system modeling, I have a strong mathematical background in optimization, with a solid understanding of networks and dynamical systems. I hope to get a chance to learn and contribute to the research at NREL.

I appreciate your consideration,

Criston Hyett

Attached: curriculum vitæ