

**Siemens**

April 12, 2023

*Concerning: Intern – AI Safety Verification of Intelligent Systems*

To whom it may concern,

I am currently a PhD student in the University of Arizona's Applied Mathematics program, involved in two projects: implementing and analyzing numerical methods to simulate natural gas flows, beginning to perform uncertainty quantification to model inclusion of stochastic renewables in the power network, and applying physics-informed machine learning to create data-driven, reduced-order models for isotropic turbulence. Broadly, I am interested in applying efficient algorithms (traditional or data-driven) to advance the so-called "energy transition" sustainably and reliably.

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.

Part of my work applying machine learning to turbulence datasets is attempting to interpret the parameterization, peeking and poking the networks to tease out the why and how of their fit and explanation. I find the application of these methods to determine (perhaps) robustness of decision boundaries, or more generally bifurcation points in the parameterization, to enable the safe use of ML in the industrial setting to provide rich problems. I look forward to discussing further with you.

I appreciate your consideration,

**Criston Hyett**

*Attached: curriculum vitae*