Asher Lantz
Seattle, WA
adlantz@uw.edu | 603-667-1229 | 08/28/25

Hiring Committee
Avalanche Energy
Seattle, WA

Dear Hiring Committee,

I am excited to apply for the Plasma Physics Code Developer position at Avalanche Energy. My background bridges computational physics and professional software engineering, and I am eager to contribute to advancing WarpX for plasma simulation.

In my research, I have developed and analyzed numerical algorithms for quantum spin systems, implementing large-scale Hamiltonian diagonalizations in Python (NumPy, SciPy) and leveraging HPC resources with Slurm. This work honed my skills in numerical stability, accuracy, and optimization of scientific code. At the University of Washington, where I am pursuing my M.S. in Physics, I continue to focus on computational methods for complex physical systems.

Alongside my research, I have several years of software engineering experience in fast-paced startups, where I built and optimized production systems in Python, AWS, and modern development workflows. At Trovata, I helped scale a financial data platform during 5–10x growth in traffic while maintaining 99.9% uptime. These roles gave me strong foundations in performance optimization, debugging, and collaborative software development.

While my primary coding experience has been in Python rather than C++, I am confident in my ability to transition quickly. My track record of adapting to new languages and technologies—while delivering reliable, optimized solutions—makes me excited to take on the challenge of contributing to WarpX.

Avalanche's mission to deliver compact fusion energy resonates deeply with me, and as a Seattle resident I would be thrilled to bring my computational physics background and software engineering expertise to your team.

Thank you for your time and consideration.

Sincerely,
Asher Lantz