

Caroline Klearman '27

Idaho National Laboratory Internship

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This past winter I was working as a mathematical logic intern at Idaho National Laboratory, a Department of Energy lab. With an automatic theorem proving tool based on LEAN, our team was attempting to prove the robustness and security of a research nuclear reactor with an AI keeper included in the loop. I learned how to use LEAN and got to see an application of math that I didn't even know existed! Additionally, it was interesting to see how the AI boom must be dealt with in an industry setting. The project is still ongoing, so I plan to stay in touch with my team and am excited to see the final proof.

I am grateful to have been supported by the Byrne funds for this opportunity. It was a very rewarding experience, and I believe it will serve me well in the future. I have been interested in learning LEAN for a while, and this was a perfect opportunity for me to dedicate time towards that goal. I plan to pursue graduate school in pure math after graduation, and I think that being proficient in LEAN could be a valuable asset. Thank you so much to the Byrne family!