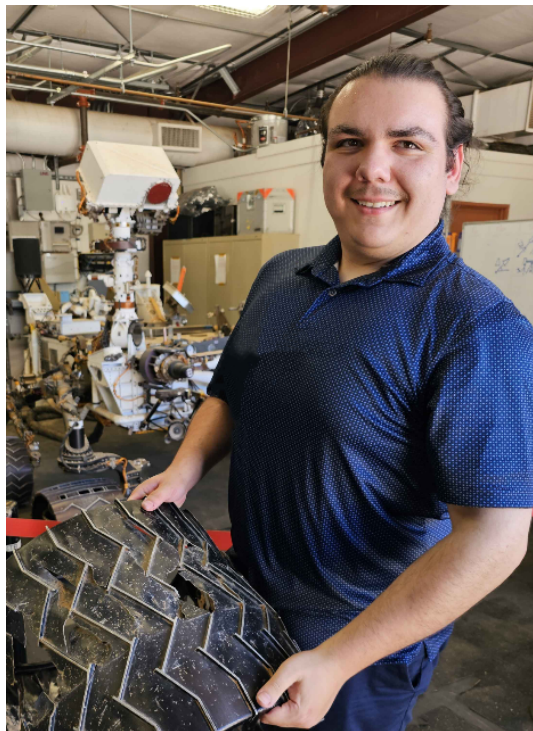


Frank Wroblewski, University of Idaho, Moscow, ID, for his project: *Testing Probabilistic Crystallinity Predictions from in-situ to Space Using Machine Learning*.



Frank Wroblewski is a Ph.D. candidate at the University of Idaho under the mentorship of Dr. Erika Rader. His research analyzes the crystallinity of basaltic lava flow surfaces using *in-situ* and remotely sensed visible and near-infrared (VNIR) spectroscopy. He uses VNIR spectroscopy to approximate crystallinity while in the field and adapts these spectra for remote interpretations on Earth, Mars, and other bodies where basaltic volcanism is inferred.

With support from the Lipman Research Award, Frank will be able to use cutting-edge computational resources to help deconstruct the patterns between *in-situ* and remotely sensed spectral data to model crystallinity with machine learning regression. From these regression models, he will attempt to determine the probability of the modeled results by tracking predictions per pixel on satellite images of lava flows.

Frank completed his undergraduate studies from Northland College, learning to read igneous rocks from the Lake Superior basin and midcontinent rift. He has been privileged to explore his interests in extrusive volcanism within planetary science through opportunities at NASA and private research corporations.

Frank is grateful for the Lipman Student Research Award and the Geological Society of America's Mineralogy, Geochemistry, Petrology, and Volcanology Division for their generous support. He is excited to start working on his research project!