An End-to-End Framework for Landslide Erosion Analysis
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Introduction
- Traditional landslide response methods are time consuming and capture critical information. However, Computational Analysis of Landslides is inaccessible and expensive.
- Research goal is to build an end-to-end landslide recreation and change detection framework.

Geometric Change Detection

Hausdorff Distance

\[ d_H(X,Y) = \max\{d(X,Y), d(Y,X)\} \]

Heatmap of calculated distance difference between point clouds

Before Heavy Rain

After Heavy Rain

Conclusion & Future Work
Our framework utilizes recent advances in open source libraries and algorithms to provide landslide responders with a single application that handles every step in the 3D reconstruction and change detection process.
- Further incorporate more robust algorithms and UI tools
- Extend framework to use learning based method for susceptibility prediction

References

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