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## Predicting Glacier Terminus Retreat Using Machine Learning

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While a majority of mass loss from the Greenland Ice Shelf is attributed to glacial terminus retreat via calving, the superimposed force factors of the ice-ocean interface create a challenge for physically modeling terminus change. Here we use time series of environmental and glacial data, input as features into a machine learning regression model, to forecast terminus retreat for marine-terminating glaciers in Greenland. We then identify the critical features that most impact a glacier's likelihood of retreat using feature importance analysis. We further analyze the heterogeneous outcomes for individual glaciers to classify them by their terminus change profile. By better understanding the parameters impacting glacial retreat, we inform physical models to reduce uncertainty in mass change projections.