Will Machine-Learning Approaches Improve Antarctic Sea Ice Predictability?

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Objective: Develop a machine-learning based model to forecast Antarctic sea ice concentration on a seasonal timescale, and to improve upon a previously created linear Markov model.

- Chosen ML architecture is a feedforward neural network
- Model uses spatial timeseries data from 1979-2021
- Both linear and non-linear models were tested

Results:

- Model performs roughly equivalent to linear Markov model
- Linear based model currently performs better than non-linear