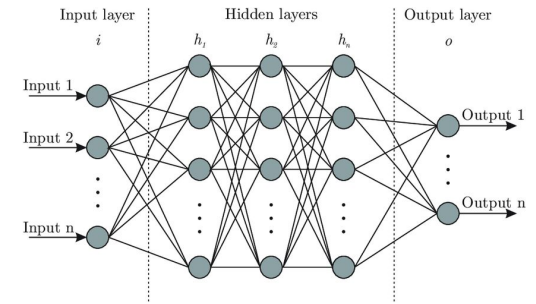
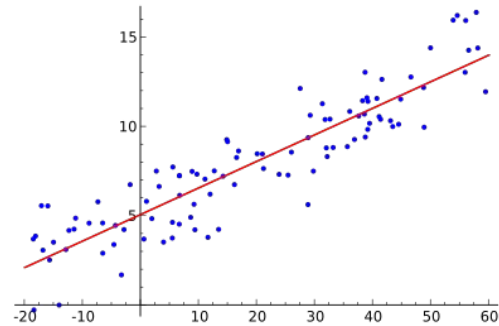
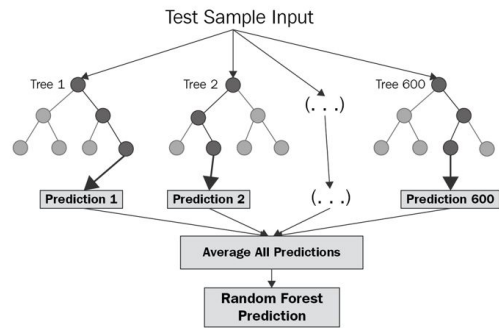


Thomas Y. Chen

AI vs. mathematical modeling for climate and weather analysis





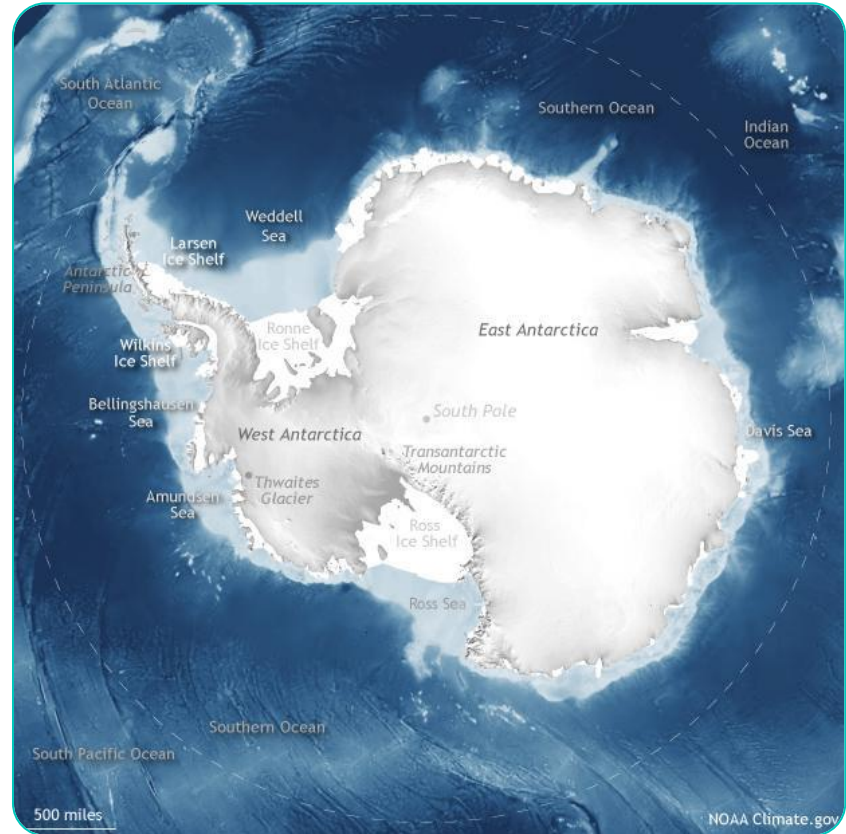
What is AI and machine learning?

How can we
harness AI in the
Antarctic for
weather/climate?



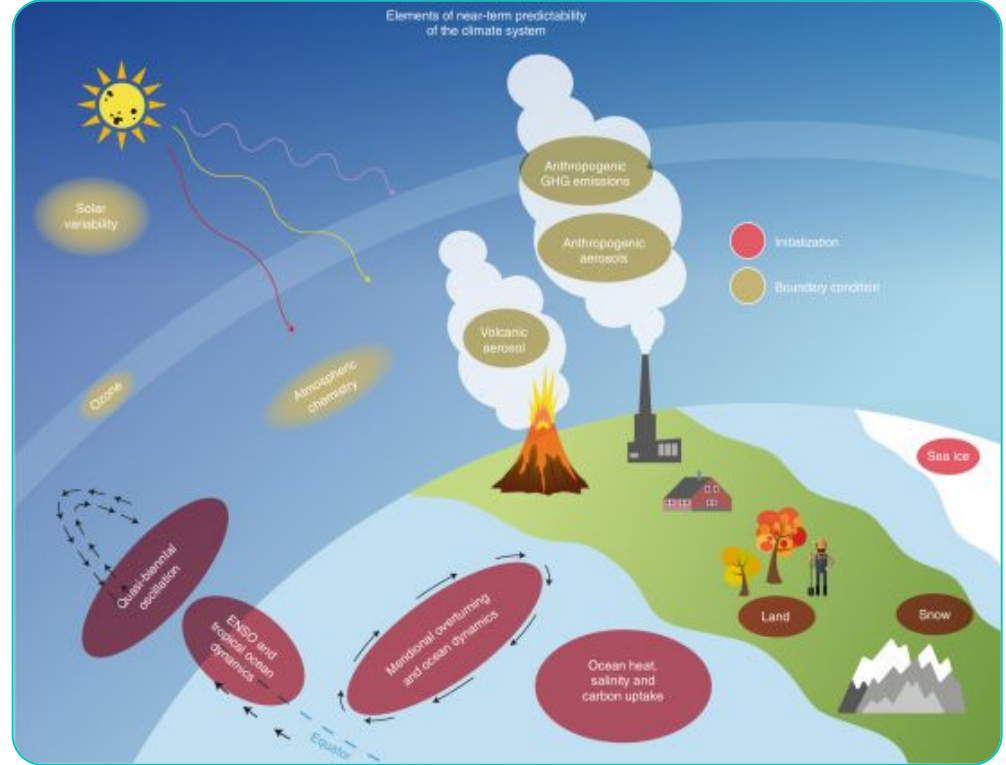
How can we harness AI in the Antarctic for weather/climate?

- Now-casting
- Short-range weather prediction
- Medium-range prediction
- Subseasonal forecasting
- Seasonal forecasting
- Climate change prediction



AI vs. traditional mathematical models

- Depends on the application
- “Hard AI”



Future work in a general sense

- Interpretability (especially with models like neural networks and random forests)
- Data assimilation
- Deployment

