

Data Driven Weather Forecasting with Rudimentary Observables

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Weather forecasting is currently dominated by a handful of centralized institutions running computationally intensive, high-dimensional numerical models over the entire global grid before disseminating results. By leveraging data-driven forecasting principles one may train a machine learning system to use simple measurements such as wind speed, pressure, and temperature to forecast those same observables with reasonable accuracy and less compute. Evidence points to this scheme working for localized measurements rather than needing data from across the globe, enabling a distributed, real-time forecasting system to bolster the traditional predictions, conduct re-analysis, and empower institutional decision-makers.

Primary author: Prof. ABARBANEL, Henry (ucsd)

Co-author: FAIRBANKS, Luke (ucsd)

Presenter: FAIRBANKS, Luke (ucsd)

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