

## **Machine learning should be used for improving weather forecast.**

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Jeremy Berg wrote an article entitled " Science of preparedness" published in Science (1). It is well known that better models should be used for weather forecasting. Fig.1 illustrates the comparison of weather forecasting errors between eta (U.S. North American Model), ecmwf (European Centre for Medium Range Weather Forecasting), cmcglb (Canadian GEM GDPS), jma (Japan Meteorological Agency) (2). The U.S. North American Model has been the worst in the existing models. Better models use integrated forecast system like ecmwf. This eta fact (the worst model) has been caused not only by Science but also by the operated science policy. The Japan Meteorological Agency' model (jma) has been the second worst in the existing models because of the similar science policy problem. In order to further improve the weather forecasting models, machine learning should be used instead of using man-made weather forecast models.

### References:

1. Jeremy Berg, Science of preparedness, Science 15 Sep 2017: Vol. 357, Issue 6356, pp. 1073
2. Weather forecast errors comparison (24 hours, 120 hours)

[https://weather.gc.ca/verification/monthly\\_ts\\_e.html](https://weather.gc.ca/verification/monthly_ts_e.html)

Competing Interests: None declared.