



AI for Weather and Climate

Kenji Takeda

Research Incubations

Microsoft Research

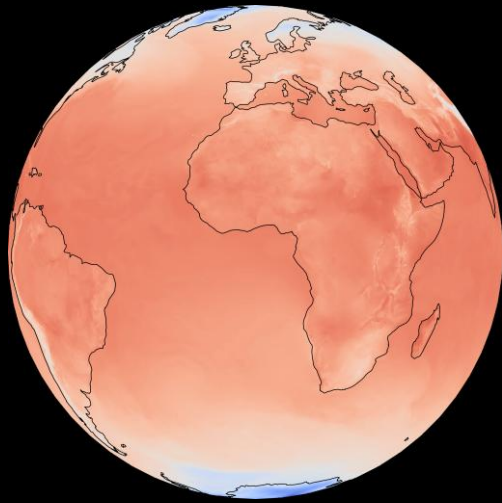
Microsoft Research



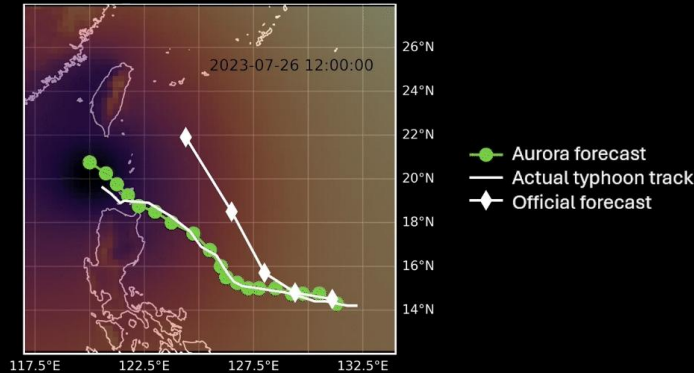
**What if we could create a single
foundation model of the Earth system?**



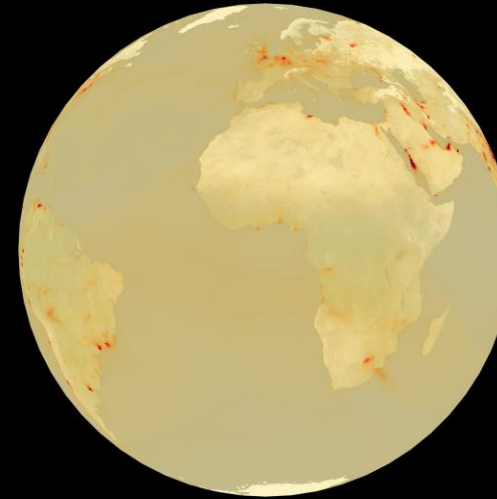
Aurora: A foundation model for the earth system



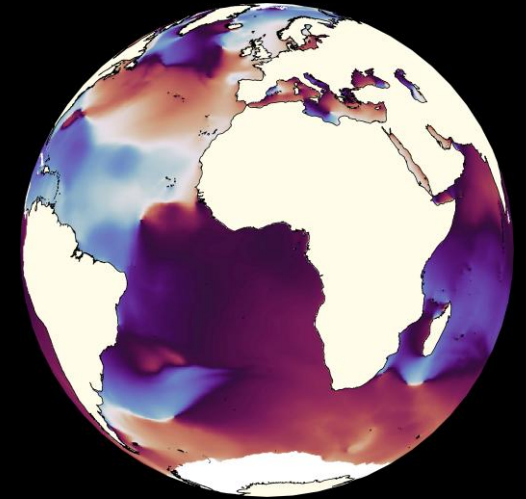
High-resolution weather
0.1 degrees



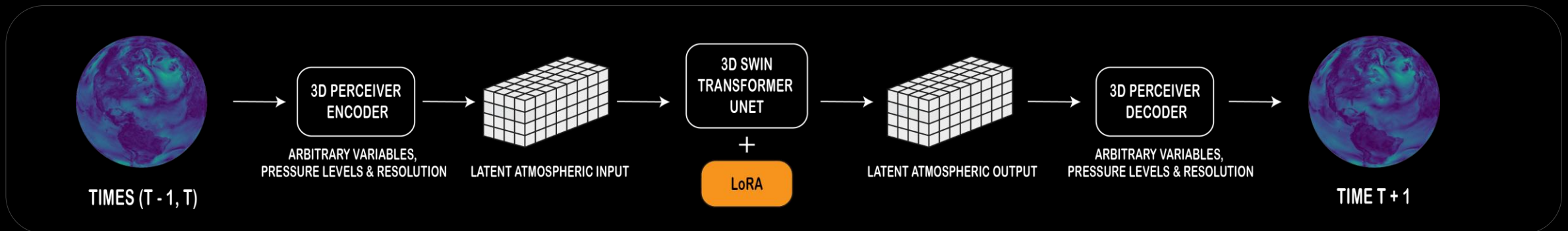
Tropical cyclone tracking
(Typhoon Doksuri)



Atmospheric chemistry and
air pollution



Ocean waves



From observations to forecasts

Aardvark – end-to-end AI weather forecasting system




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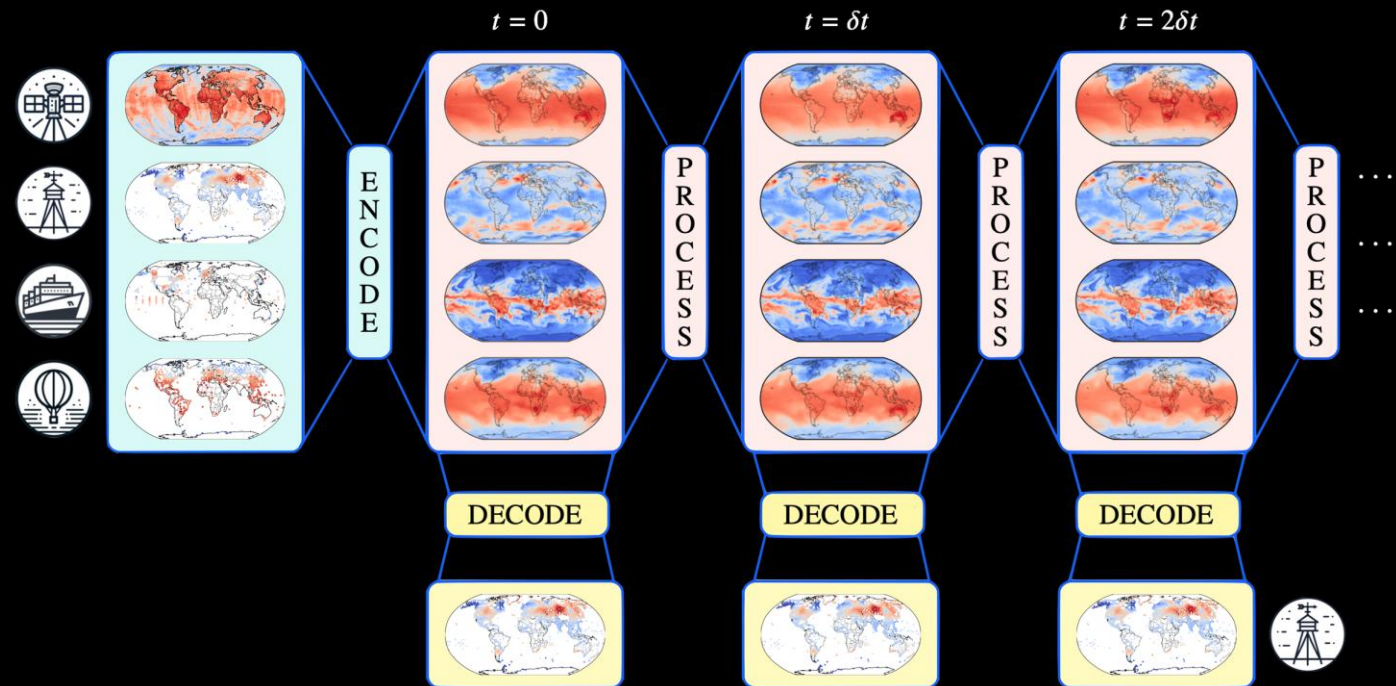
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End-to-end data-driven weather prediction

[Anna Allen](#) , [Stratis Markou](#) , [Will Tebbutt](#), [James Requeima](#), [Wessel P. Bruinsma](#), [Tom R. Andersson](#), [Michael Herzog](#), [Nicholas D. Lane](#), [Matthew Chantry](#), [J. Scott Hosking](#) & [Richard E. Turner](#) 

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Microsoft.com/Research

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"One of the reasons Microsoft is such an exciting partner for us is that we feel that there is much more value that can be extracted from our data by other people as well as by us."

Penny Endersby
Chief Executive Officer of the Met Office

<https://aka.ms/UKMetOffice>



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