



# Probabilistic ensemble forecasting of Australian COVID-19 cases

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# Outline

# Background

In March 2020, I joined a team responsible for providing probabilistic forecasts of COVID-19 cases to all Australian state & territory Chief Health Officers. We use case-level data of all Australian positive COVID cases, along with nationwide surveys and mobility data from Google, Facebook and Apple. Three separate models have been built: (1) a stochastic susceptible-exposed-infectious-recovered (SEIIR) compartmental model; (2) a stochastic epidemic model; and (3) a global autoregressive model based on public case data from 31 countries. These are then combined into a mixture ensemble to generate probabilistic forecasts of daily cases which are provided to the Australian governments each week. I will discuss the ensemble

# Thanks!



## More information

- Slides and papers: **robjhyndman.com**
- Packages: **tidyverts.org**
- Forecasting textbook using fable package:  
**OTexts.com/fpp3**

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