

Uncertain futures

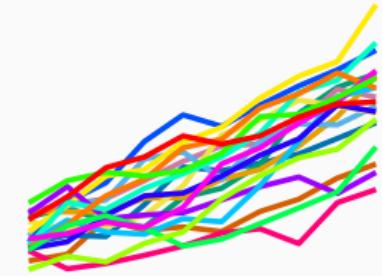
Rob J Hyndman



robjhyndman.com/aas2021



MONASH University



What can we forecast?



What can we forecast?



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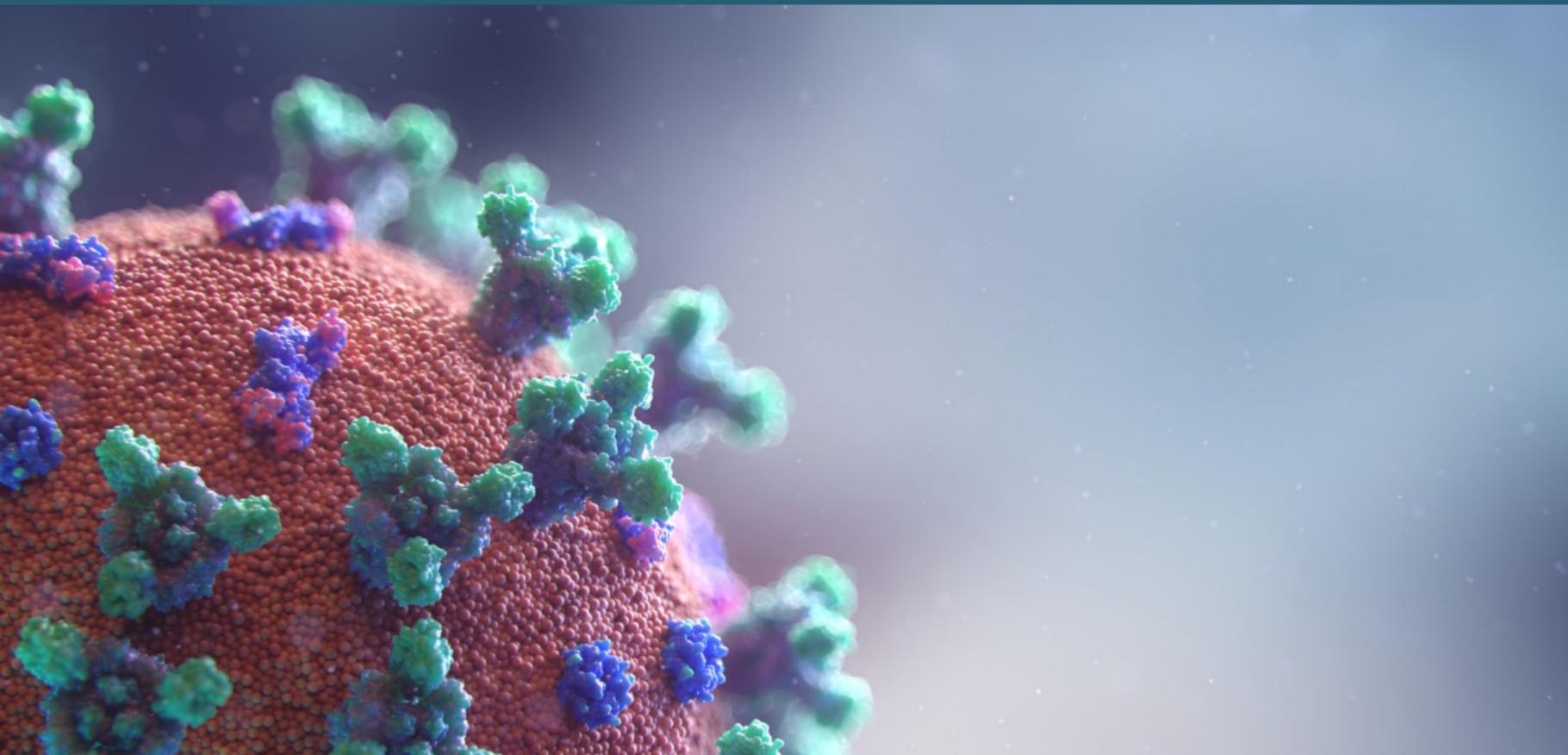
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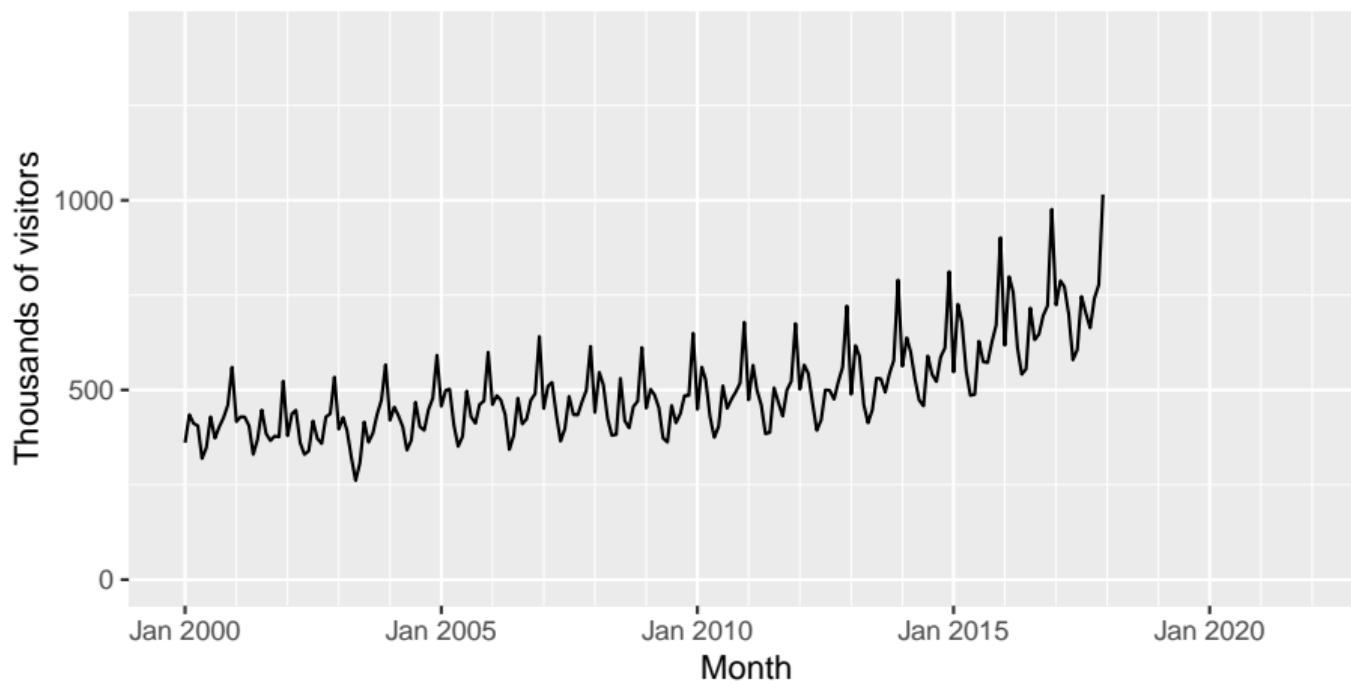
Random futures

A forecast is an estimate of the probability distribution of a variable to be observed in the future.

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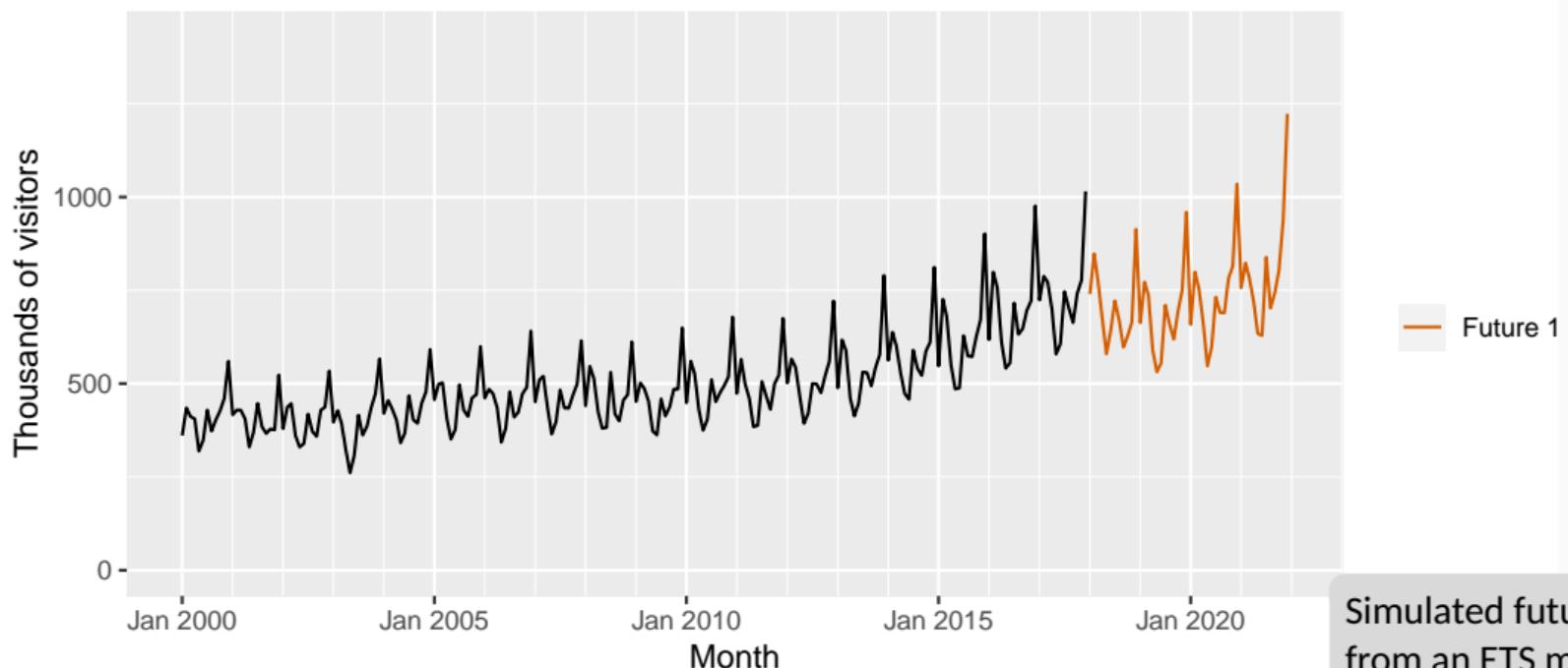
Total short-term visitors to Australia



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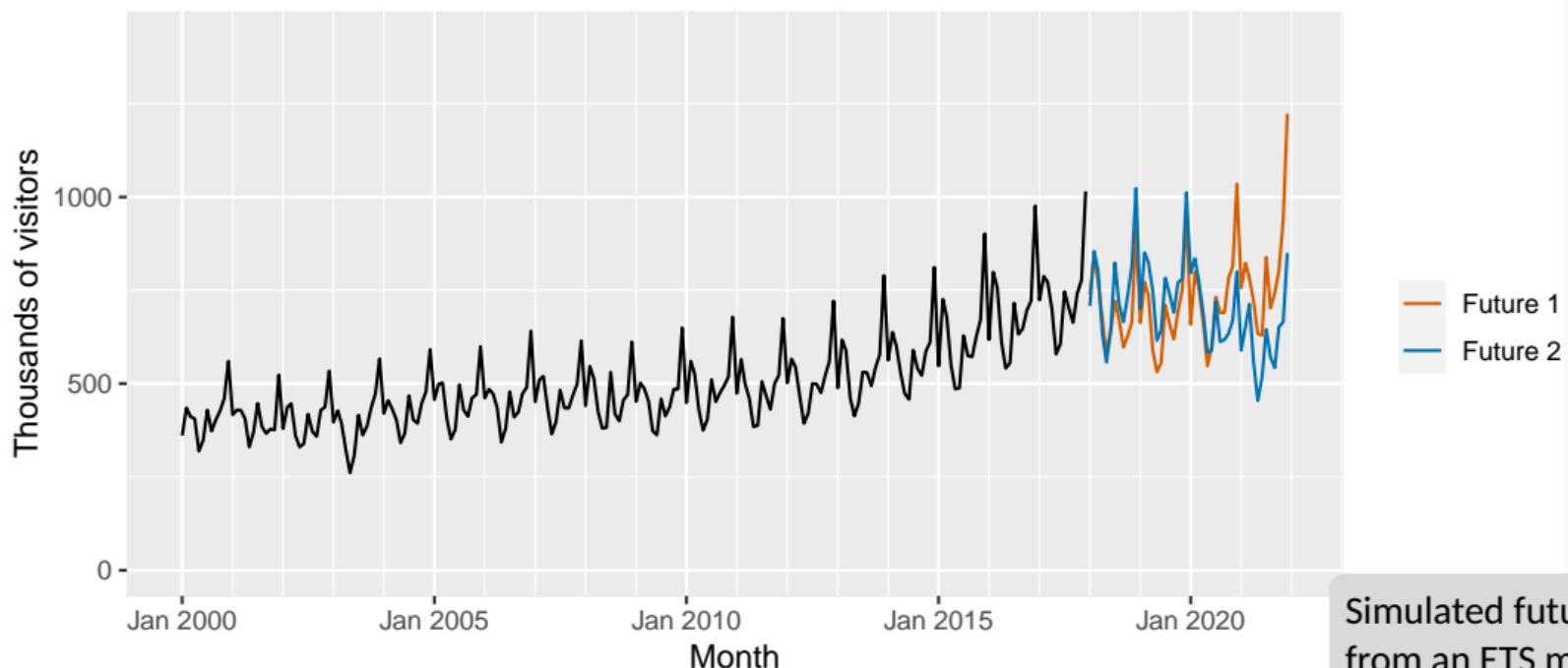


Simulated futures
from an ETS model

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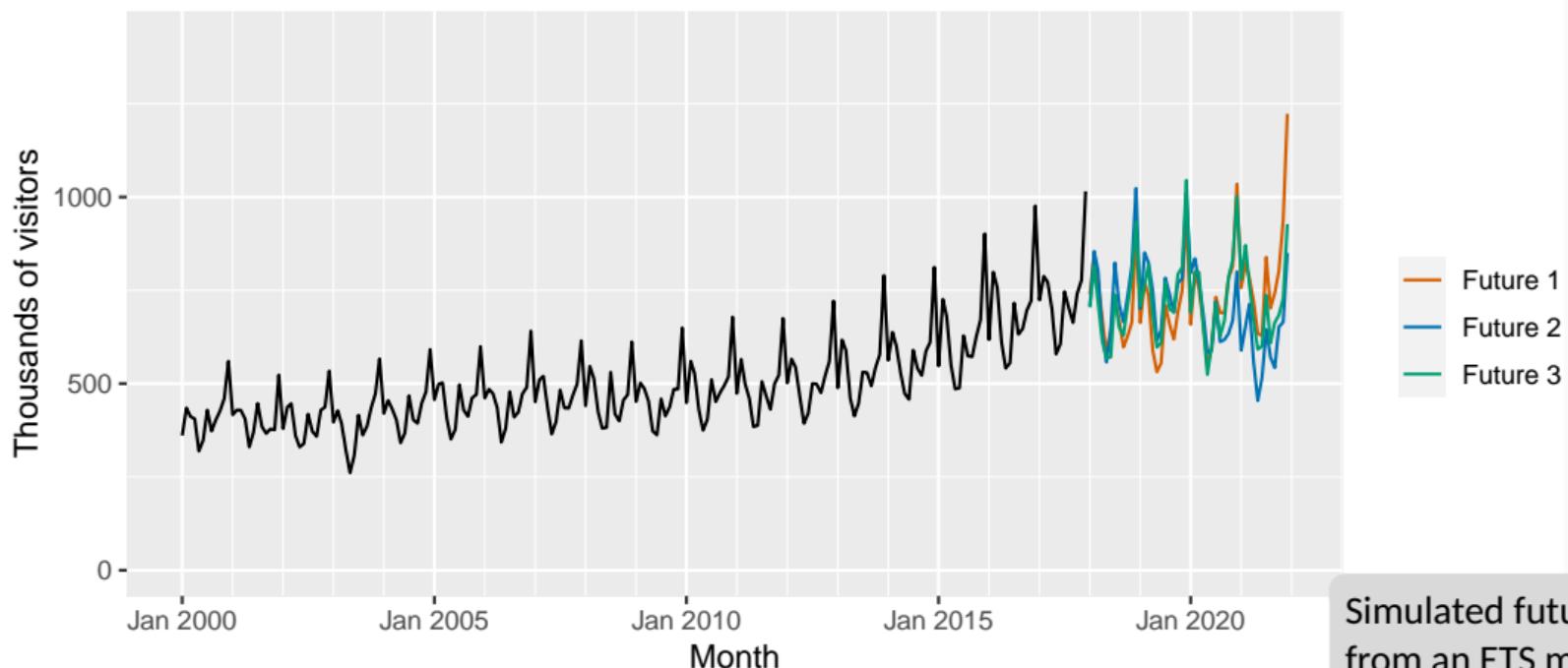


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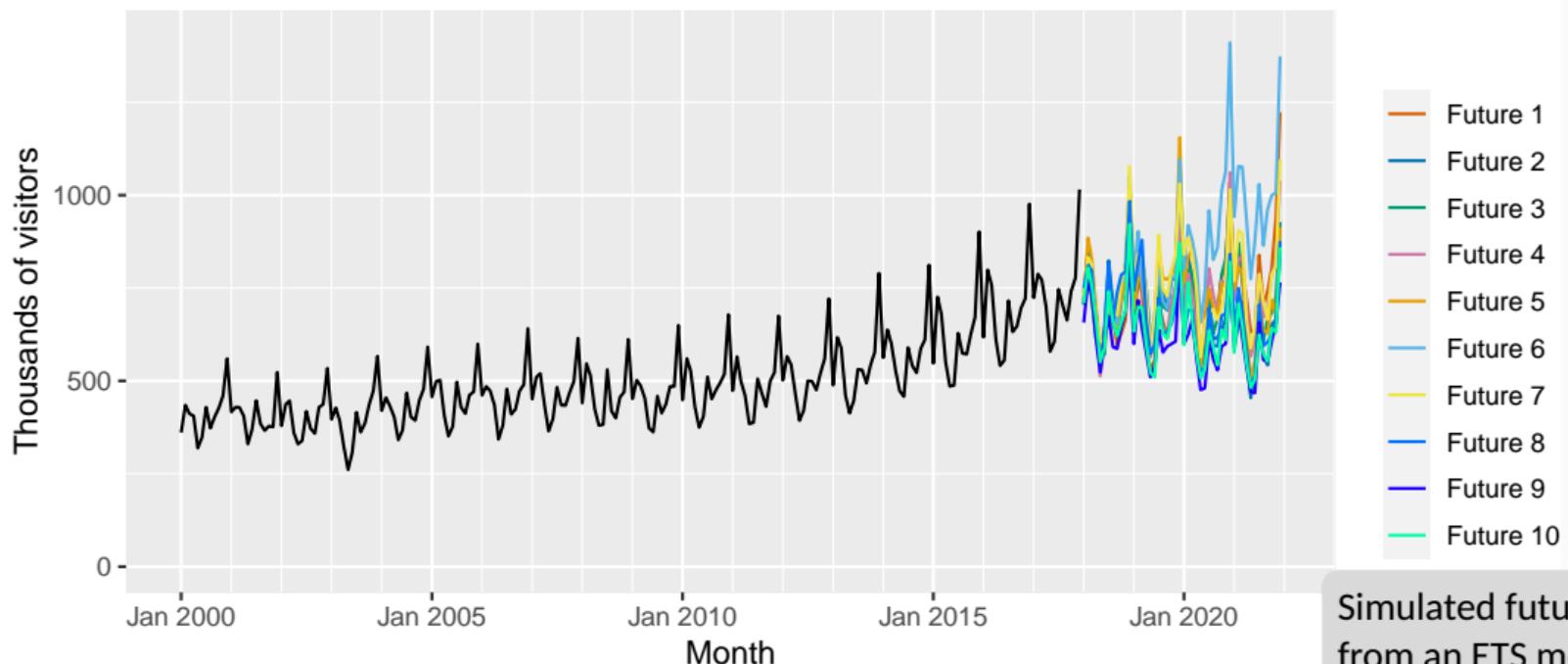


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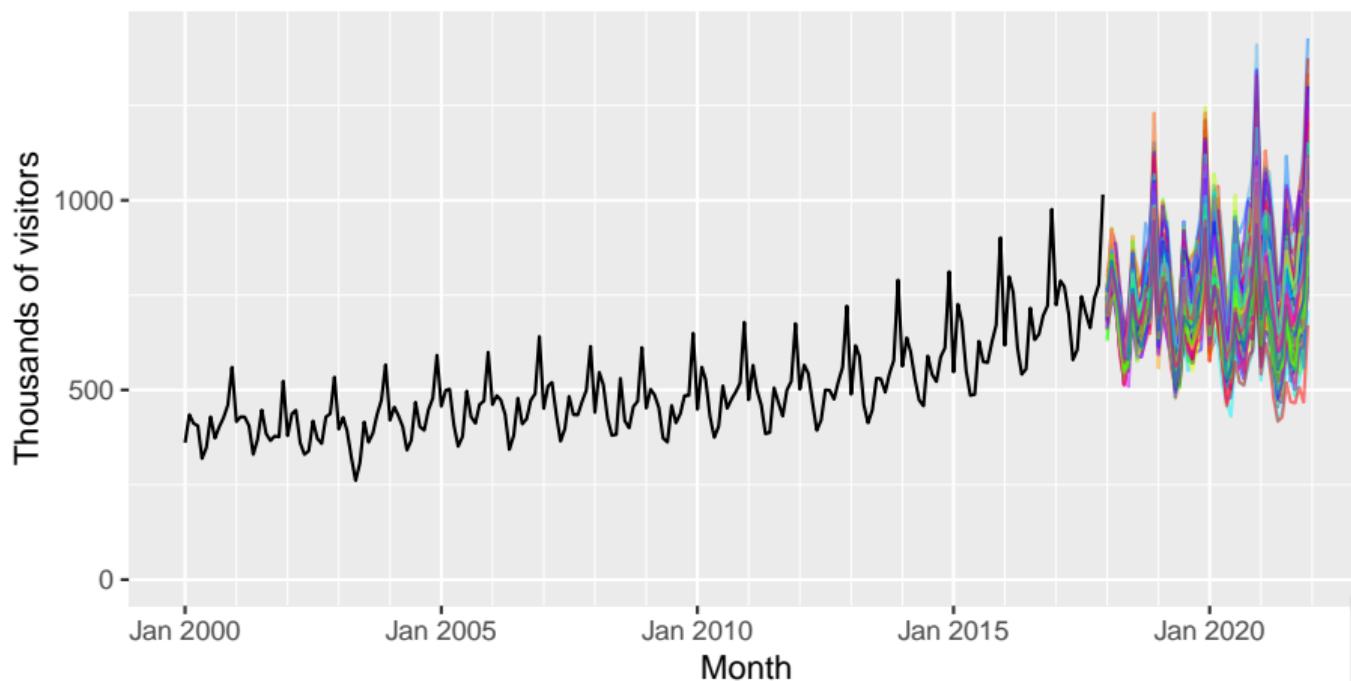
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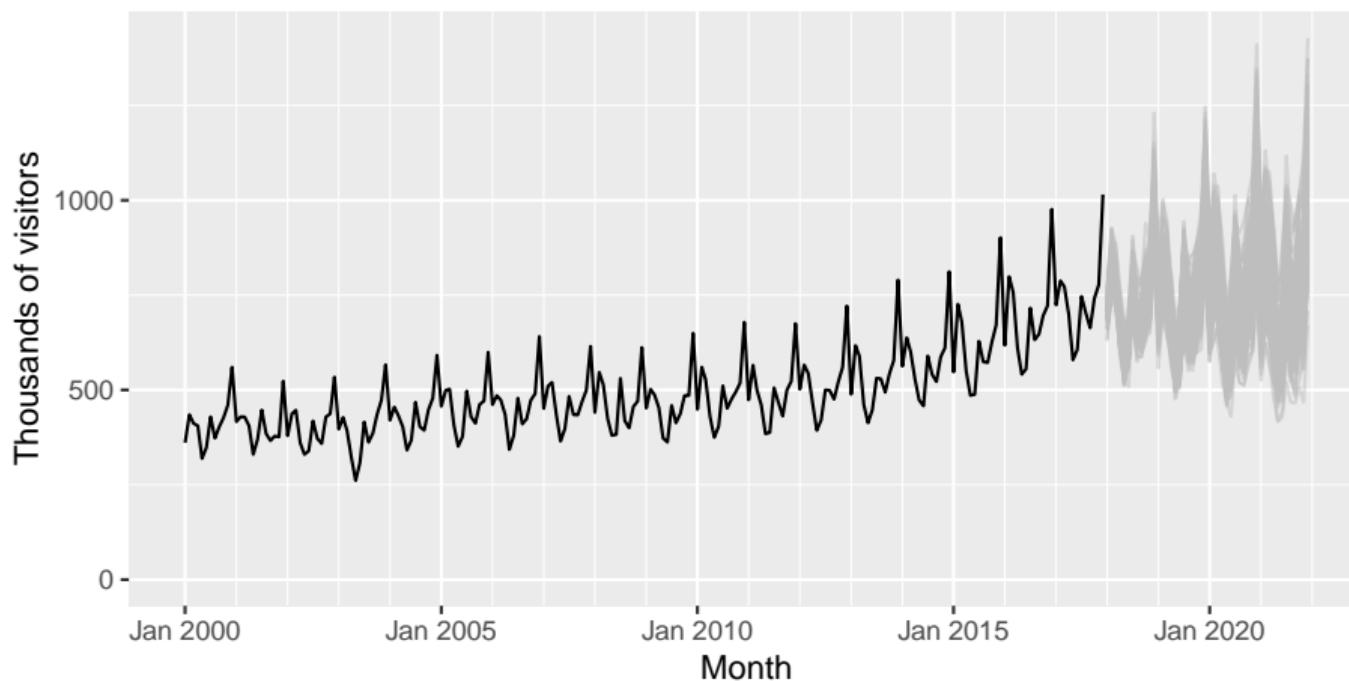


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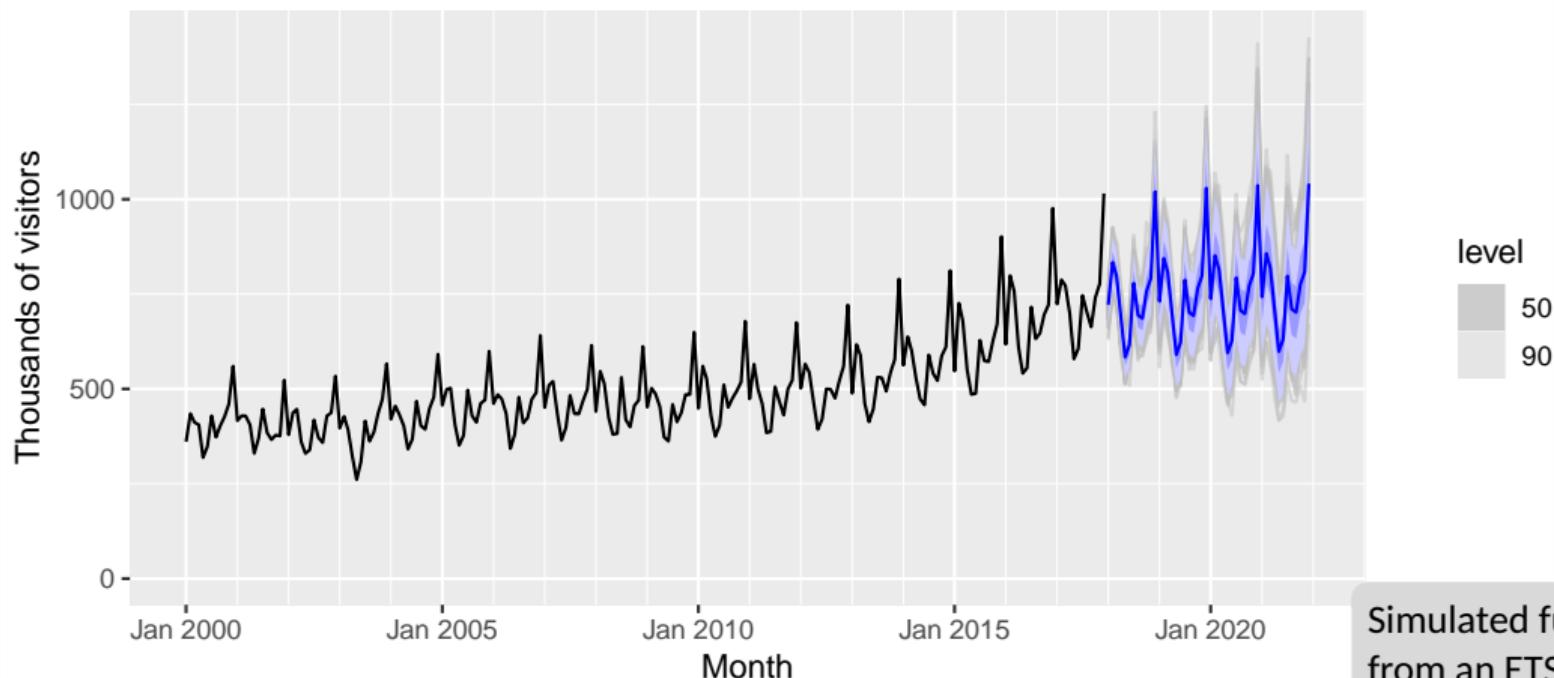
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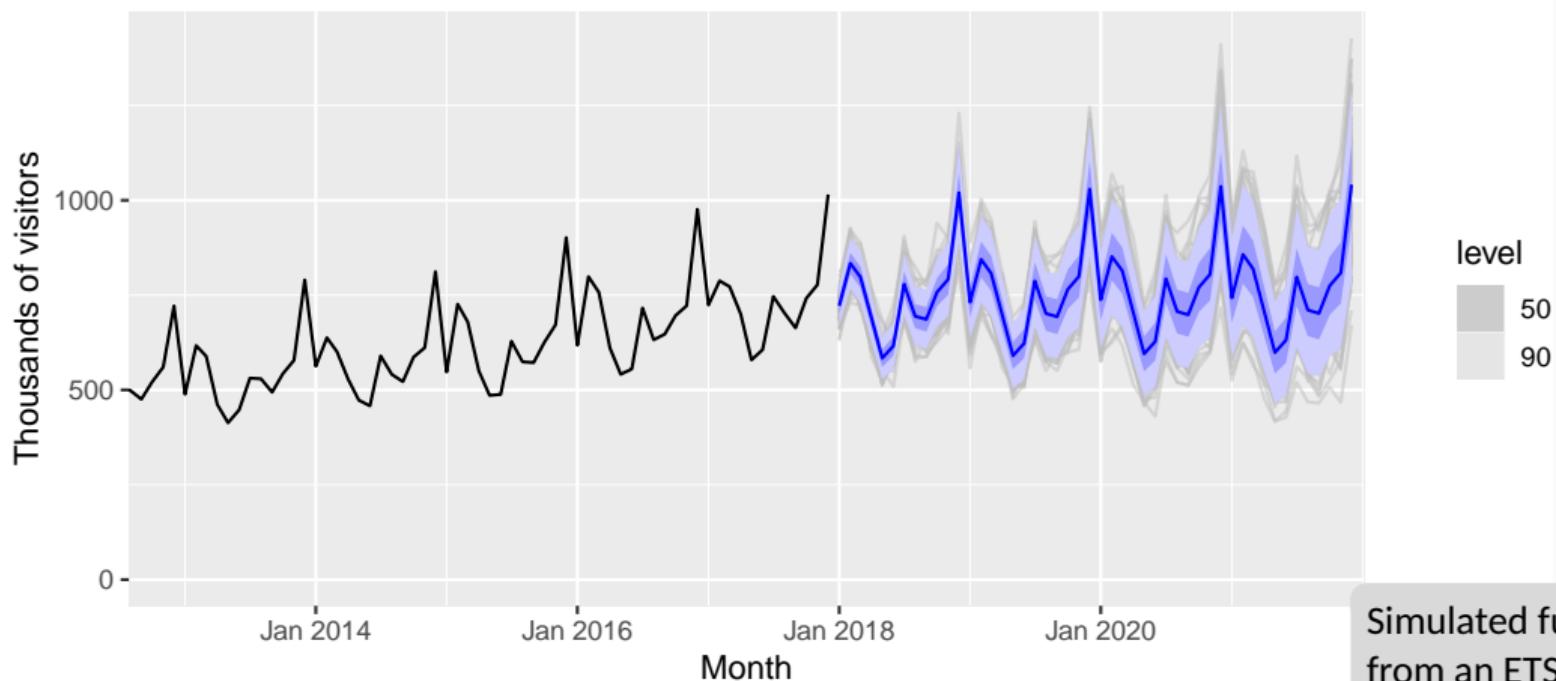


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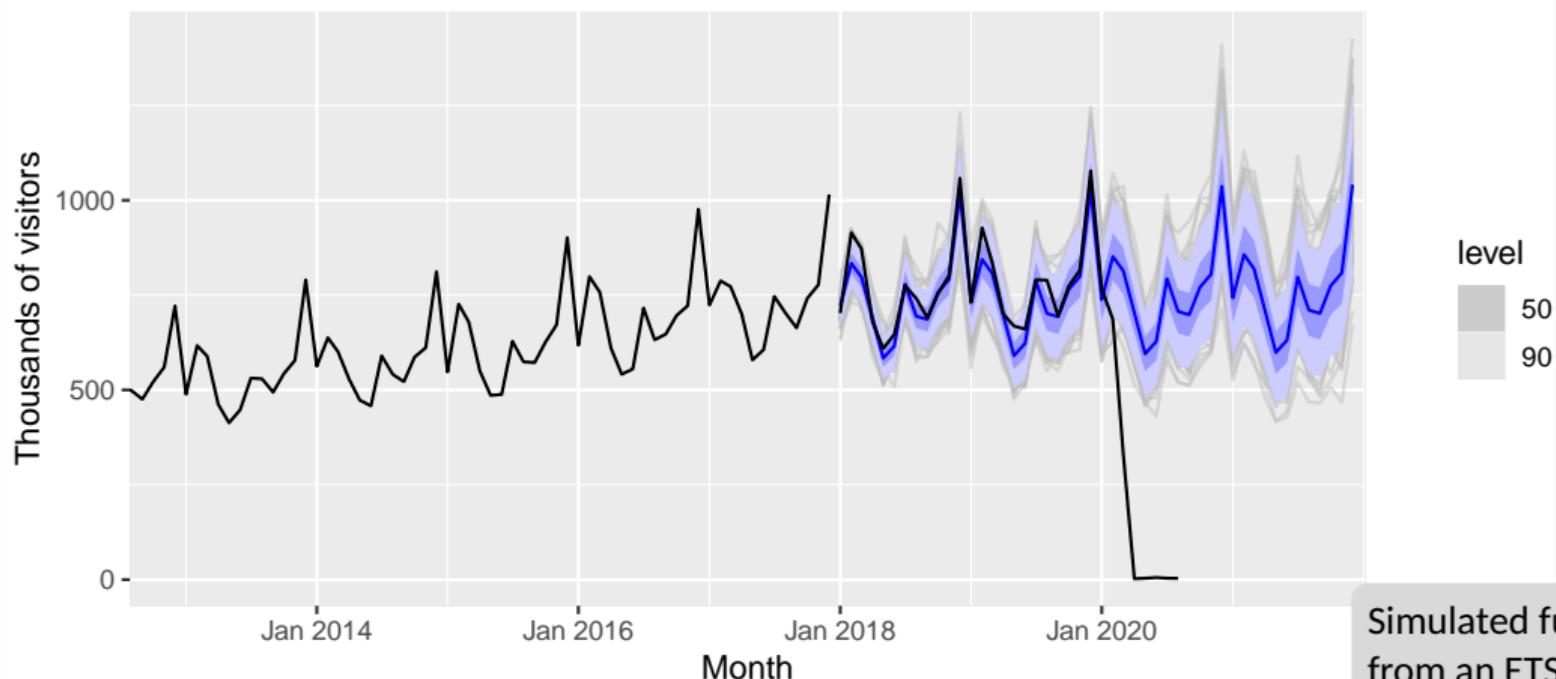


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Forecastability factors

Something is easier to forecast if:

- 1 we have a good understanding of the factors that contribute to it, and can measure them.
- 2 there is lots of data available;
- 3 the future is somewhat similar to the past
- 4 the forecasts cannot affect the thing we are trying to forecast.

Forecasting by maggots



Forecasting by maggots



Clay model of sheep's liver

Used by Babylonian
forecasters approximately
600 B.C.

Now in British Museum.

Forecasting by hallucination



Forecasting by hallucination



Forecasting and the law

Anyone who consults a soothsayer on account of curiosity of the future will suffer capital punishment.

Codex Theodosianus 9.16.4



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More information

 robjhyndman.com

 [@robjhyndman](https://twitter.com/robjhyndman)

 [@robjhyndman](https://github.com/robjhyndman)

 rob.hyndman@monash.edu

Slides: robjhyndman.com/aas2021