

Rain in Australia

Next-day prediction model

By T.J. Kyner



The Goal

From farmers growing crops to a family planning a weekend vacation to logistical decision making within airlines, **rain is highly influential regarding plans**. An accurate prediction model for whether it will rain can be used in a weather app for the benefit of a **variety of stakeholders**.



Introduction



Data



Model



Next Steps



Conclusion



Data Source

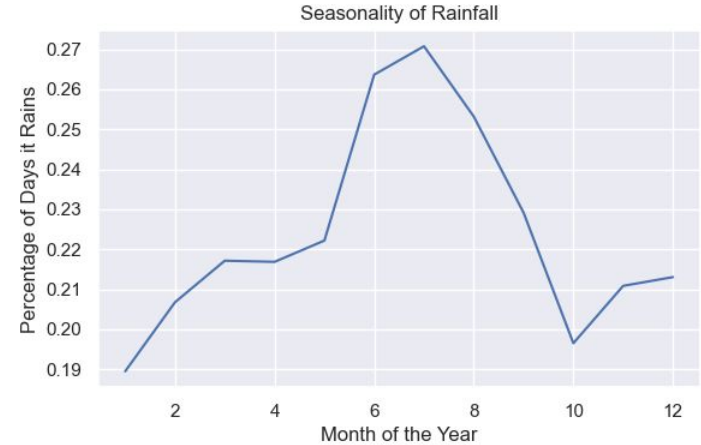
- Downloaded from the **Kaggle** dataset titled “Rain in Australia”
- Original data sourced from the **Australian Bureau of Meteorology’s Daily Weather Observations** website



Data Features

- Date
- Location
- Temperature*
- Rainfall
- Evaporation
- Sunshine
- Clouds*
- Wind*
- Humidity*
- Pressure*

*Readings at 9AM and 3PM



Model Results

86%

Accuracy of the model

Feature Importances



Location
41.7%



Wind
29.2%



Month
7.4%



Humidity (3PM)
6.8%



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Next Steps

- Further hyperparameter tuning
- Engineering new features such as trailing amount of rain or sunshine
- Collecting additional data from nearby countries (for example, does rain originating in Indonesia or New Zealand have predictive power?)
- Attempting to predict the *amount* of rainfall



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Thank You!

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