Project Proposal: Predicting Next-day Rain in Australia

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1 Why It Is Important

Going into a new day knowing whether or not it will rain can change the entire trajectory of someone's day. Rather than walking or biking to work, one may decide to take public transport or to work from home. Additionally, on multiple weeks or months without rain, a community may experience droughts and water scarcity, which in turn could affect the entire agricultural well-being of the nation. Forecasting these seemingly small changes can help organizations, such as Australia's government, better prepare for the day ahead by offering more public transportation during rainy days in the needed locations, increasing the number of ambulances due to increased car accidents during rainy days, or aiding communities with water scarcity to ensure that they have the resources they need. Additionally, being able to better predict whether or not it will rain in certain locations may allow Australia's government to save money by planning to prevent a disaster ahead of time.

2 Data

The data set that we are analyzing comes from the Australian government's bureau of meteorology website, which records daily weather observations across each of Australia's six states. It contains attributes about the day's weather such as: minimum and maximum temperature, amount of rainfall, hours of sunshine, wind speed, and wind direction. Ideally, we would want to see if we can differentiate any of these components as key indicators of rain to produce the most accurate predictions of whether or not it will rain in Australia in the future days.

3 Links

Australian government dataset: Data