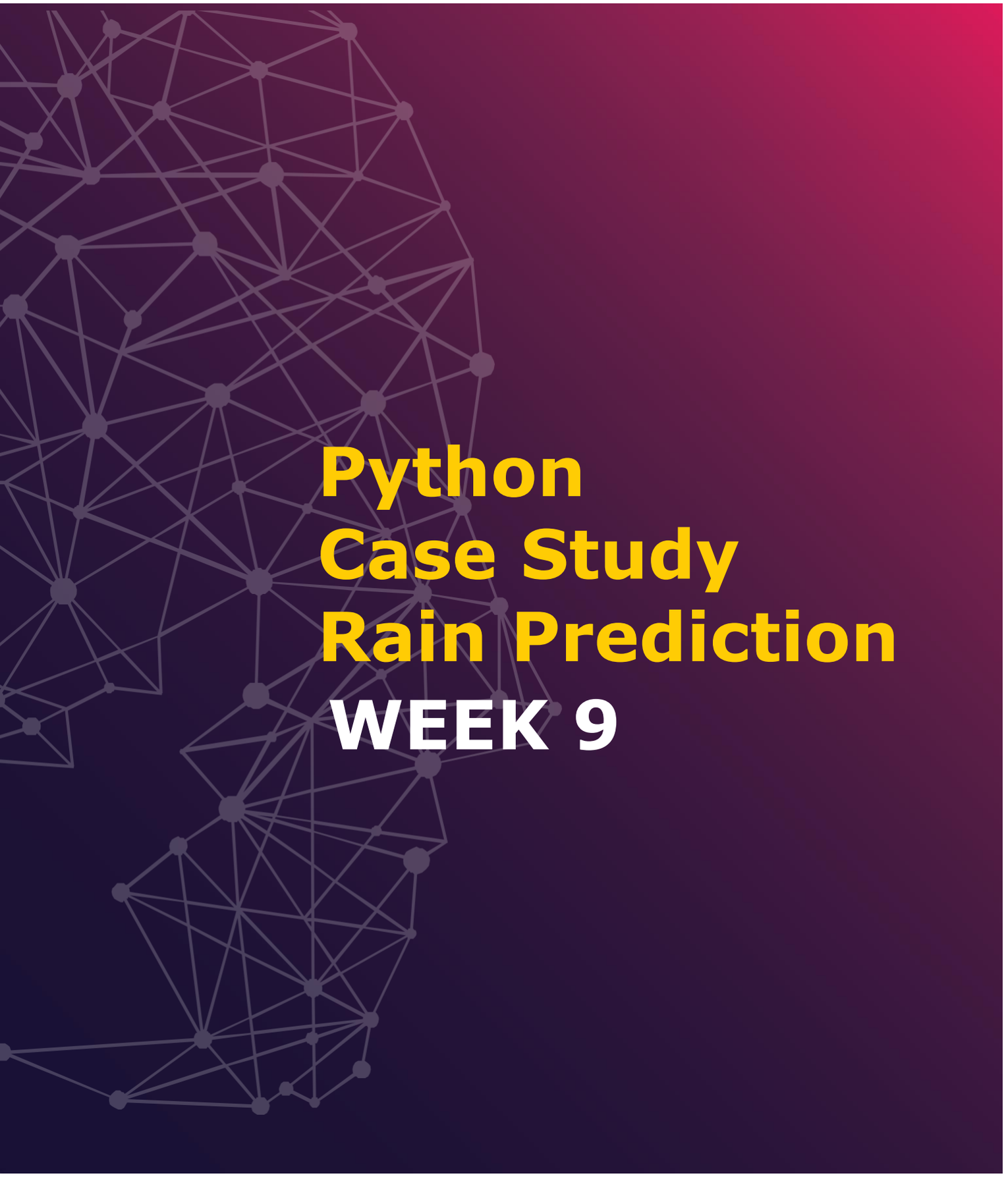

Python Case Study Rain Prediction

WEEK 9

Data Science Academy

CASE STUDY

Disclaimer: This dataset contains about 10 years of daily weather observations from numerous Australian weather stations.

Dataset description: RainTomorrow is the target variable to predict. It means - did it rain the next day, Yes or No? This column is Yes if the rain for that day was 1mm or more.

Date - The date of observation
Location - The common name of the location of the weather station
MinTemp - The minimum temperature in degrees celsius
MaxTemp - The maximum temperature in degrees celsius
Rainfall - The amount of rainfall recorded for the day in mm
Evaporation - The so-called Class A pan evaporation (mm) in the 24 hours to 9am
Sunshine - The number of hours of bright sunshine in the day.
WindGustDir - The direction of the strongest wind gust in the 24 hours to midnight
WindGustSpeed - The speed (km/h) of the strongest wind gust in the 24 hours to midnight
WindDir9am - Direction of the wind at 9am
WindDir3pm - Direction of the wind at 3pm
WindSpeed9am - Wind speed (km/hr) averaged over 10 minutes prior to 9am
WindSpeed3pm - Wind speed (km/hr) averaged over 10 minutes prior to 3pm
Humidity9am - Humidity (percent) at 9am
Humidity3pm - Humidity (percent) at 3pm
Pressure9am - Atmospheric pressure (hpa) reduced to mean sea level at 9am
Pressure3pm - Atmospheric pressure (hpa) reduced to mean sea level at 3pm
Cloud9am - Fraction of sky obscured by cloud at 9am. This is measured in "oktas", which are a unit of eigths. It records how many eigths of the sky are obscured by cloud. A 0 measure indicates completely clear sky whilst an 8 indicates that it is completely overcast.
Cloud3pm - Fraction of sky obscured by cloud (in "oktas": eighths) at 3pm. See Cload9am for a description of the values
Temp9am - Temperature (degrees C) at 9am
Temp3pm - Temperature (degrees C) at 3pm
RainToday - Boolean: 1 if precipitation (mm) in the 24 hours to 9am exceeds 1mm, otherwise 0
RainTomorrow - The amount of next day rain in mm. Used to create response variable RainTomorrow. A kind of measure of the "risk".

Task: In this case study, you will build your first Neural Network using PyTorch. You will use it to predict whether or not is going to rain tomorrow using real weather information.

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