Exercise 2.3: Complex Machine Learning Models (Random Forests)

1990s Random Forests and Important Features (96% accuracy)

A diagram of a company

AI-generated content may be incorrect.

A graph of a graph showing the weather

AI-generated content may be incorrect.

2010s Random Forest and Important Features (98% accuracy)

A diagram of a company

AI-generated content may be incorrect.

A graph showing the weather

AI-generated content may be incorrect.

Madrid, Budapest and Ljubljana have the highest influence on the Random Forest Model in both decades.

Madrid Random Forest and Important Features (99% accuracy)

A diagram of a network

AI-generated content may be incorrect.

A graph with blue bars

AI-generated content may be incorrect.

Budapest Random Forest and Important Features (99% accuracy)

A diagram of a diagram

AI-generated content may be incorrect.

A graph of a bar graph

AI-generated content may be incorrect.

Ljubljana Random Forest and Important Features (99% accuracy)

A diagram of a network

AI-generated content may be incorrect.

A graph of a bar

AI-generated content may be incorrect.

Observations

**Madrid top Indicators: Temp\_max, Temp\_mean, Precipitation**

**Budapest top Indicators: Temp\_max, Temp\_mean, Precipitation**

**Ljubljana top Indicators: Temp\_max, Precipitation, Global\_radiation**

When forecasting future weather events, temperature readings stand out as the most significant indicators. This is evidenced by the consistent presence of **'temp\_max'** among the top three indicators across the three most influential weather stations. Additionally, our earlier analysis revealed a rising trend in average temperatures over time, which corresponds with the global trend of climate change. Consequently, it is essential to consistently evaluate how the rise in global temperatures will affect future weather patterns.