

# Hello Mr. Weatherman, Welcome to Data Science Land!

A UVA Data Science Case Study



The Intergovernmental Panel on Climate Change (IPCC) has published six different reports since 1990 that detail potential scenarios for how the planet may warm over the next 100+ years. While this group is made up of many esteemed meteorologists and atmospheric scientists, how can we know that their warming predictions are sound in Data Science Land?

It is your job to put the work of these scholars to the test.

You are tasked with using the provided data and code to compare the model predictions to those created by the IPCC. Then, you will be responsible for thinking about the implications of this model and how it could be applied to future predictions and scenarios.

**Prompt: Can you confirm the projections made by the IPCC using a time-series prediction model? Do these projections mostly align with the A2 Scenario predictions that the IPCC has generated?**

Primary Deliverables:

1. Basic Assignment:
  - a. A graph that shows the predicted surface temperature values for 1850-2015.
  - b. Two to three paragraphs (PDF) that detail why there may be differences between the temperatures that the model predicts and the IPCC data.
2. Challenge Assignment:
  - a. A graph that shows predictions for surface temperatures from 2016-2099.
  - b. One to two paragraphs (PDF) comparing the model's overall predicted temperature change from 1999-2099 with the change that the IPCC predicted in the A2 scenario.
3. Any supplemental code used to produce the above results.