### **How to implement using your own data**

The implementation of the code in this project was made easy thanks to the Google Colab interface. Google Colab provides a convenient environment for data manipulation and offers various packages for neural networks, making it an ideal choice for this project. With Google Colab, I was able to easily manipulate and analyze the data, as well as utilize neural network libraries to train and evaluate models. The user-friendly interface and the availability of powerful packages streamlined the implementation process. Here are the steps so you can run the code with your own data.

1. Prepare the cloud coverage data:

* Ensure that your cloud coverage data is in CSV format.
* Upload your cloud coverage data to a publicly accessible location, such as GitHub or a cloud storage service.
* Replace the URLs `cloudF`, `cloudMrc`, `cloudO`, `cloudC`, and `cloudMnt` in the code with the URLs of your cloud coverage data files.

2. Organize the cloud coverage data tables:

* - Replace the variable names `tableCldF`, `tableCldMrc`, `tableCldO`, `tableCldC`, and `tableCldMnt` with appropriate variable names for your cloud coverage data tables.
* Modify the code within each section (for Fresno, Merced, Oakdale, Coalinga, and Manteca) to match the structure and column names of your cloud coverage data.

3. Prepare the weather data:

* Ensure that your weather data is in CSV format.
* Upload your weather data to a publicly accessible location, such as GitHub or a cloud storage service.
* Replace the URLs `urlFresno`, `urlMerced`, `urlOakdale`, `urlCoalinga`, and `urlManteca` in the code with the URLs of your weather data files.

4. Organize the weather data tables:

* - Replace the variable names `tableFresno`, `tableMerced`, `tableOakdale`, `tableCoalinga`, and `tableManteca` with appropriate variable names for your weather data tables.
* Modify the code within each section (for Fresno, Merced, Oakdale, Coalinga, and Manteca) to match the structure and column names of your weather data.
* Make sure to add the necessary columns to identify the location (latitude, longitude, altitude) and split the date-time column into separate date and time columns.

5. Merge the cloud coverage and weather data:

* Replace the variable names `Fresno\_merged\_table`, `Merced\_merged\_table`, etc., with appropriate variable names for your merged tables.
* Modify the merging code to match the column names and merging logic based on your data structure.

6. Perform further data processing and analysis:

* You can continue manipulating and analyzing the merged tables based on your specific requirements.
* Modify the code or add additional code to perform calculations, visualizations, or any other analysis you need.

After adding your own data, simply run the remaining code blocks in the provided code. This will execute the necessary steps and instructions to process and analyze your data.Remember to check and verify the data types, column names, and data structures in your own data to ensure they match the code's expectations.