

Please send:

(1). The code (R/Python) of Q1 (ideally for Q2 also)

(2). The answer for Q1 and Q2.

Both in pdf format to [Daeshaun@growsquares.com](mailto:Daeshaun@growsquares.com) and CC [Shawn@growsquares.com](mailto:Shawn@growsquares.com)

**Q1:** Plot the Daily GHI (Global Horizontal Irradiance) value over time for each year in a figure with a legend. GHI to sunlight intensity is like Fahrenheit to temperature. Briefly write down your conclusions drawn from analyzing the data over the course of the provided years detecting if there is any seasonality within the sunlight values is very important as well as understanding max/min, monthly average, etc.

A similar type of project is often encountered in which we must acquire data, understand and conceptualize trends in order to inform the approach to our model in terms of plant recommendation.

**Q2:** Describe an idea you have for sunlight prediction, feel free to make assumptions from your data (you could use given sunlight data or assume more other data with claims).

- 1) What is the problem? Classification/prediction?
- 2) What is the framework and your core model?
- 3) Why you choose this model?
- 4) What feature could be required for this model?
- 5) What is your loss?
- 6) What is the metric?

**Q3 (Optional):** Write a code to output the latitude and longitude values from all New York City zip codes.