

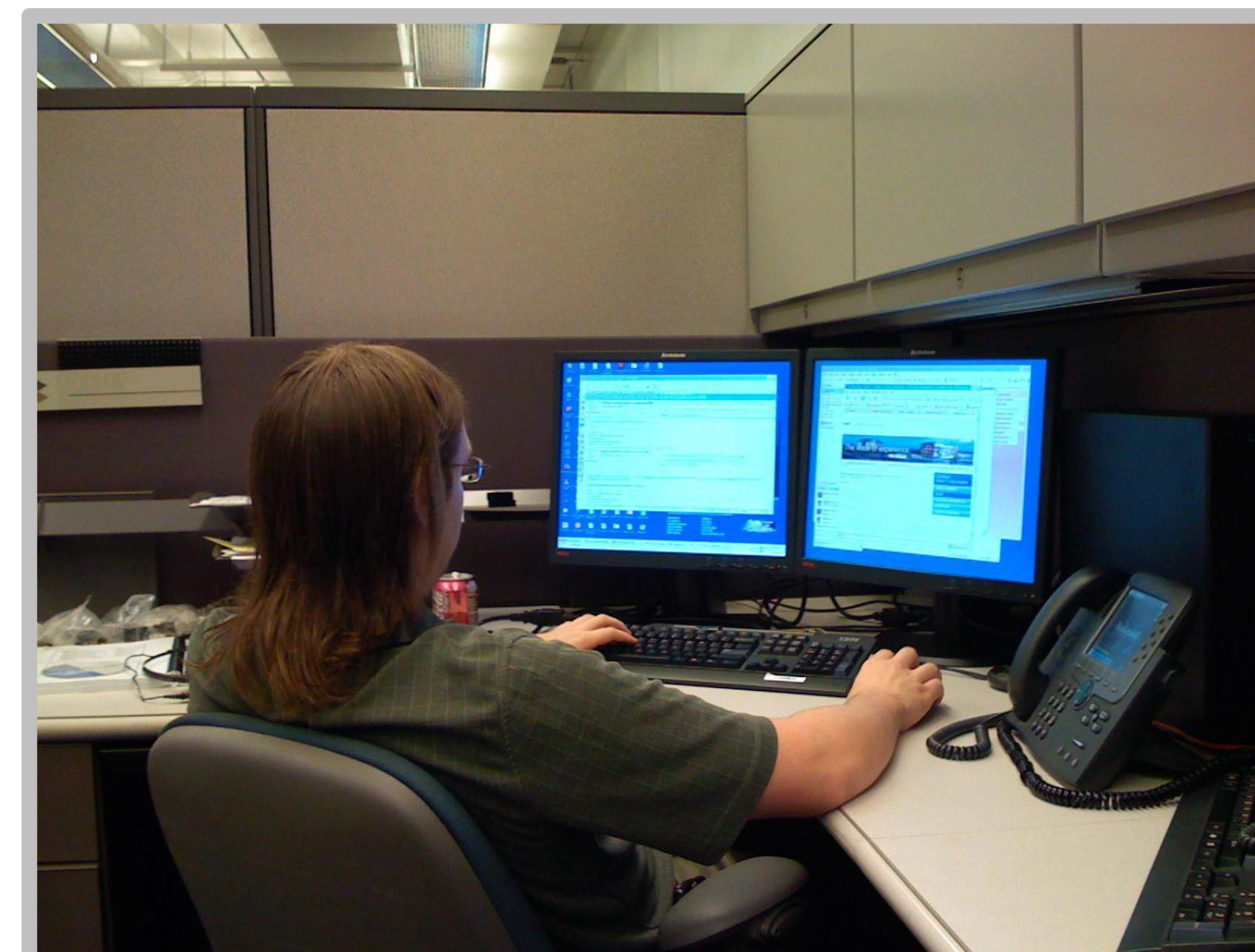
# Using Remote Sensing Data to Predict the Spread of Mosquito Borne Diseases

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## 1. Ask a Question:

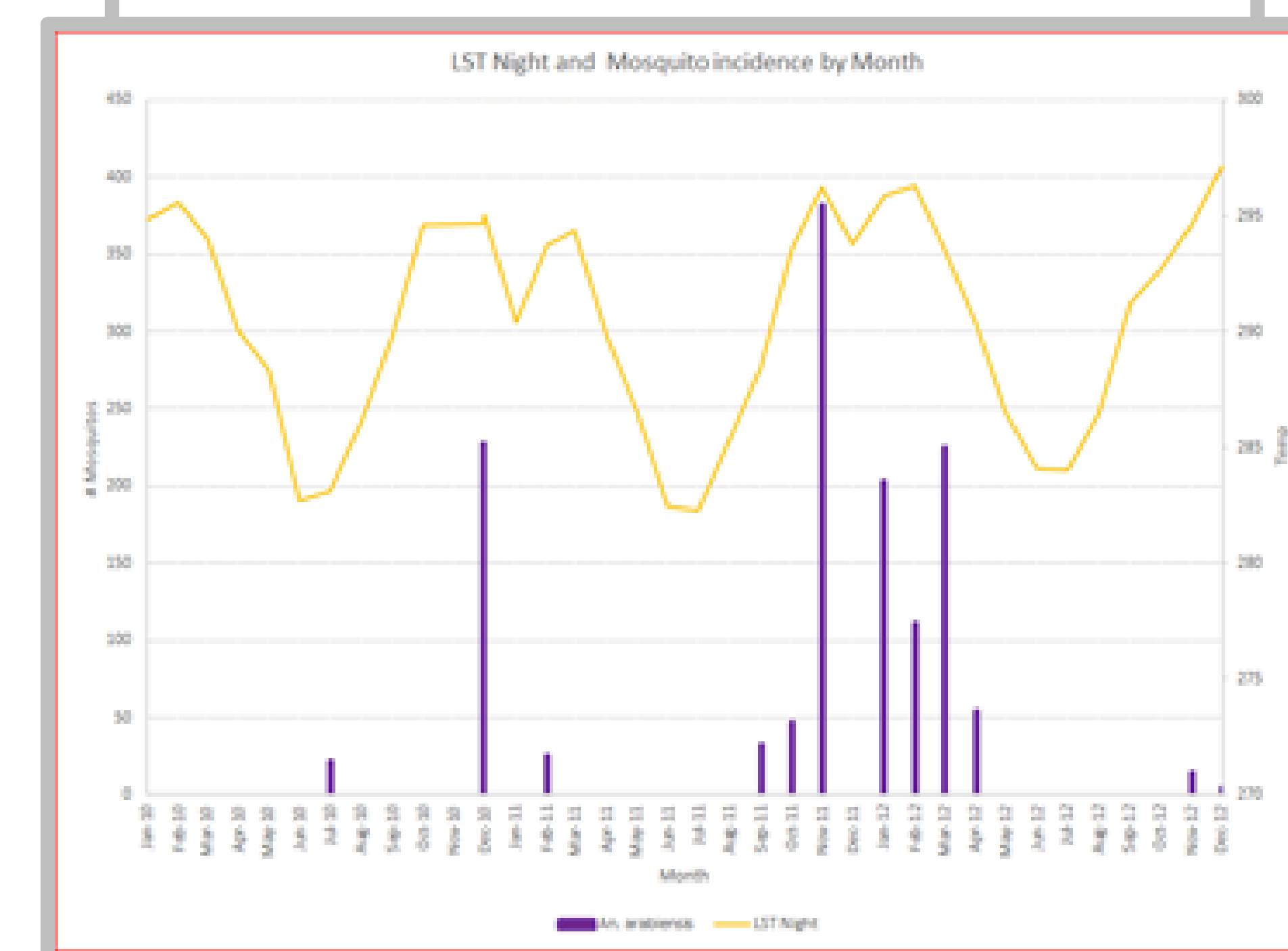
Using satellite data, can we make predications about what conditions cause malaria carrying mosquitos to thrive?



## 5. Analyze Data/Draw Conclusion:

What did I learn?

- Graphs were analyzed.
- Preliminary results (seen on graph): Abundance of malaria causing mosquitoes correlated to peak night time temperature.
- This study is continuing using other variables, Random Forest Software and regression testing to provide an even clearer picture of the conditions that allow malaria carrying mosquitos to thrive.



## 3. Form a Hypothesis:

"We can predict where malaria causing mosquitos live using satellite data."

- Malaria can cause severe illness or death.
- Ability to predict areas at risk for malaria helps in planning for mosquito eradication efforts (fumigation) or for personal protection (ex. using insect repellent, bed nets).

## 4. Test the Hypothesis:

How can I prove that satellite data can predict where malaria causing mosquitos live?

- Data was downloaded from the satellites.
- The data was studied for trends, anomalies and lags.
- The data was also graphed.

## 2. Do Background Research: Why use satellite data?

- To obtain continuous data on temperature, relative humidity, soil moisture, surface inundation, precipitation and other variables that are important for mosquitos habitats. This data is found on the Aqua, Terra and TRMM NASA satellites
- In many areas of the world, ex. Africa, satellites are the only source of environmental data.



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