

Project Write-up: Traceroute Heatmap

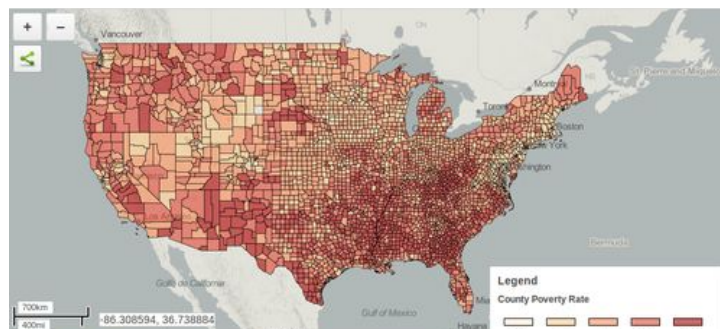
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Introduction

Heatmaps have recently become a popular tool to visualize data. Advancements in processing power, the decrease in price of storage, and the increase in accessibility of the tools used to collect data, it is becoming easier to collect large amounts of data, not only for business use but also for motivated individuals. As such, organizing that data into creative, visually interesting ways are becoming increasingly popular, to help a wider audience reach conclusion about a complex set of data.

Description

This project will run traceroute throughout the day, pinging several websites within and outside the US, from New Jersey. It will generate a heatmap similar to the one below, showing individual counties in the US and their relative intensity of access in color.



Tools

Our project will be completed in Python, using an external library to plot data onto a heatmap of the US.

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| <u>Traceroute:</u> | Where our data will be collected from. Python has the ability to execute shell commands, through either a subprocess or python's native system library. |
| <u>ipinfo.com</u> | Ipinfo.com responds to simple get requests with an IP address and responds with a JSON file with latitude and longitude. |
| <u>Plotly</u> | Plotly will be used to generate a heatmap using the data received from Traceroute and ipinfo.com. |
| <u>FCC Enterprise Area</u> | FCC's Enterprise Area API returns the county of the given latitude and longitude through GET requests. |