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INFO 474

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Final Deliverable write-up

List of User Tasks

This visualization is intended for users with a vested interest in precipitation metrics in city centers. This viz makes use of the actual, average and record precipitation levels for every date in the given datasets. I included New York, Seattle and Indianapolis in this visualization, although any number of datasets could be included assuming they are formatted correctly. Some use cases for this visualization include:

- Geomorphologists – rainfall contributes to landslide susceptibility, especially in regions where the soil is not densely packed with rocks. Understanding rainfall trends can be crucial to maintaining infrastructure.
- Climatologists or climate researchers – rainfall trends can be easily compared across cities to help inform weather predictions.
- Farmers and public garden participants – people who grow their own produce in urban gardens need to understand rainfall trends to ensure they can plan to water their produce during abnormally warm or dry periods.
- Urban planners – design firms contracted to build public spaces can use these data trends to determine how necessary elements to protect against the rain are.
- Civilian – people moving to a new city, or just planning to visit, would benefit from understanding rain trends annually in a given city.

Design Overview (1-2 paragraphs)

In my capstone project, creating data visualization tools for an aerospace startup, I learned the importance of being able to easily compare different datasets measuring the same value. I wanted to emphasize that capability with this viz, which is why I laid all three variables on the same graph for comparison. I also considered whether I should allow the user to switch between datasets and compare the variables, or vice versa (choose a variable, have all three lines displayed). I decided that, since the city was the primary identifier that the user would most likely want to filter by, I would create a drop-down menu allowing the user to swap out which dataset was being plotted.

When creating this visualization, I wanted users to be able to address questions regarding rainfall metrics in different US cities, such as:

- How does the annual rainfall average in [city1] compare to that of [city2]?
- My produce / plants require [volume] of water per month during the summer, and [volume] of water per month during the winter. Will rainfall in this area be sufficient?

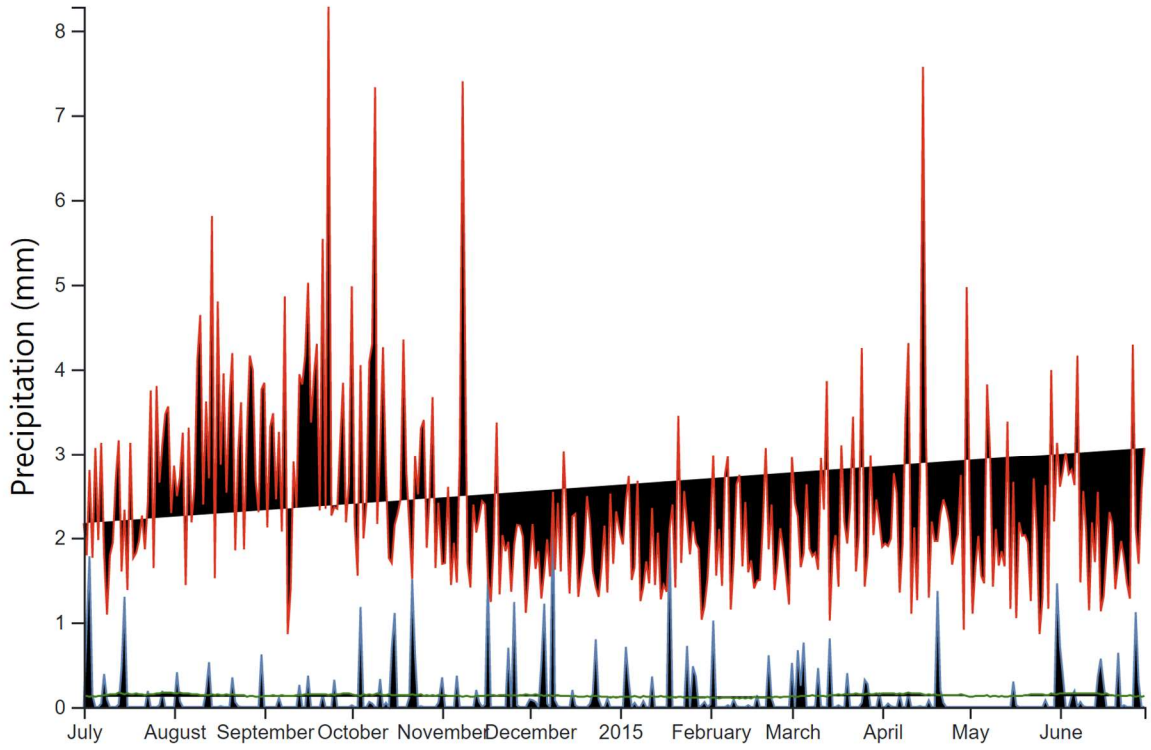
- My house is built on a rock unit containing primarily shale and hydrated soil; am I at risk of a landslide assuming historical rainfall maximums repeat themselves?
- Will rainfall in [city1] discourage people from using outdoor public resources?

Screenshots

KNYC.csv

Date: Mon Dec 01 2014 00:00:00 GMT-0800 (Pacific Standard Time)

Record Precipitation: 1.72



Additional Information

GitHub link: https://github.com/lswans/INFO474_final_lswans