9.2.4

Plot the Data

Early one morning, you wake up to a text from W. Avy: "Aloha! Just having some ice cream and thinking about the waves! How is the analysis coming along? Hoping to get your results in time for our quarterly board meeting, but haven't seen anything from you yet."

You've made great progress on your analysis, so you text back confidently, "Aloha! Putting the final touches on plotting the data today, so you should have my initial findings by this evening." Then you stretch, sigh, and get to work plotting your results. You are one day closer to Oahu!

Remember, your goal is to provide W. Avy with insight into the weather patterns of a specific location on Oahu where you would like to build your shop. One way to provide this insight is with a visualization—we'll plot the results of our precipitation analysis using Matplotlib.

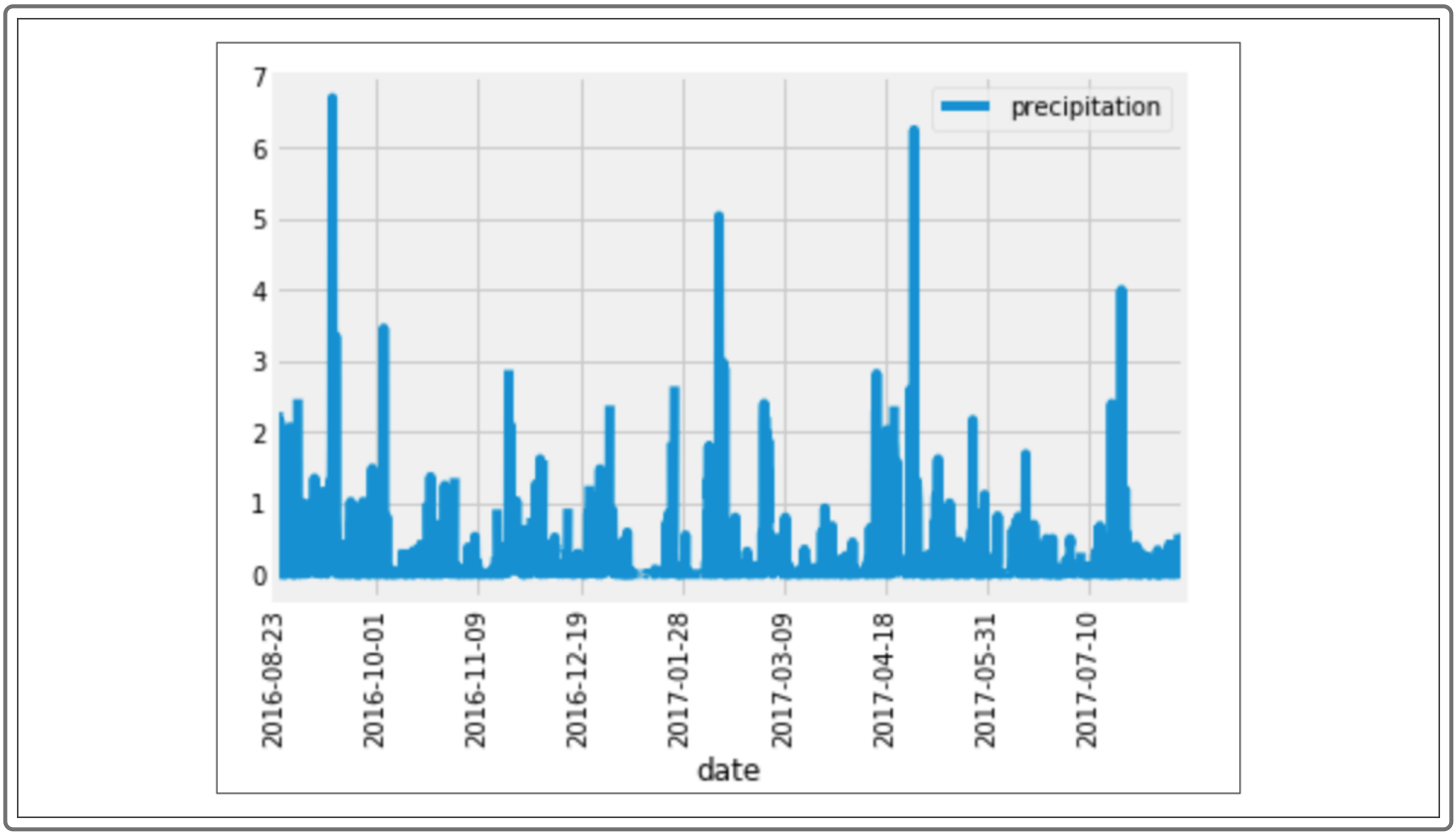
REWIND

We've covered plotting before, using Matplotlib. We'll be using Matplotlib for this project as well. Plotting is essentially displaying your data in a visual way. There are many different types of plots, but we'll use a select few for this analysis.

Since our DataFrame is represented as the variable `df`, we can use the `df.plot()` function. Type the following code:

```
df.plot()
```

Run this code. Your plot should look similar to the following:



Along the x-axis are the dates from our dataset, and the y-axis is the total amount of precipitation for each day. While this data shows all of the station observations, we are interested in determining weather trends. One trend we can observe based on this plot is that some months have higher amounts of precipitation than others. Awesome—this observation confirms that the plot is useful. W. Avy is going to love it!

Next, we want to create a summary of a few statistics, and then we can send W. Avy an email with our initial findings. Be sure to tell W. Avy that this plot shows the total precipitation per day.

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