206 Final
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APIS Used :
Darksky
Facebook

**API #1 Darksky**

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Goals:

- Obtain access key from https://darksky.net/dev
- Contact Dark Sky API
- Obtain local weather data from Ann Arbor
    - Chose the highs and lows temperatures of the current week
- Cache the data in JSON format
- Enter the JSON data into a SQL table
- Apply formatting to the graph
    - Edited title of graph + x-axis + y-axis

*Original goal: obtain weather data on the past 100 days

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**Which goals you achieved**

All but original goal once realized that the original goal was not easily obtainable.

**What problems you faced**

I didn't have a laptop for the beginning 2 weeks of this project so I spent a great deal researching and not really sure what to do. I got my laptop back 5 days before the final was due and I knew I had to learn fast. I originally learned how to contact the dark sky API via Urllib requests and tinkering around with the url. I had a very difficult time with caching, but eventually went back to project 2 and 3 and copied the process over and it worked.

I also had a hard time learning where my pip installs were being installed. For some reason some of the pip installs were in my download folder and the others were in my 206 folder where my python 3.6 install folder was located. I learned that it is very important to include a modules folder where you can house all of your installs.

I had to change my strategy once I started tinkering around with the data... I quickly realized that my original goal of tracking the last 100 days was harder than I originally anticipated. In the early stages of development, I had a program that read 100 different URLs via urllib to get the last 100 days, but it became very overwhelming very quickly (and went through request keys like crazy) so I went with an easier approach.

**Your social media "report"**

N/A for darksky.

**Instructions for running your code.**

Make sure all of the installs at the top are installed and you should be able to run it without any issues.

If wanted, you can edit the weather access token and insert your own. Same goes for the Plotly username and API key.

**API #2 Facebook**

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Goals:

- Learn how to Facebook Graph API works
- Use the API to obtain data on when I post to my Facebook
- Cache the data in JSON format
- Convert the JSON to a SQL3 database
- Cache the data in JSON format
- Enter the JSON data into a SQL table
- Visualize the data.
- Connect Plotly +

*Original goal: see if there is a connection to weather data and when I am posting on Facebook.

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**Which goals you achieved**

All but original goal once realized that the original goal was not easily obtainable.

Learned at the end of the project that once you have a python script that works it isn't very difficult to search for other variables. So I searched for likes as well and created a database of the timestamp of when I like things on Facebook.

**What problems you faced**

I originally set out with the intentions of seeing if there was a correlation between the amount of posts I have and the weather-- using the DarkSky API and Facebook Graph. After about 15 minutes of researching I realized that I didn't have the skills, or time to take on a task that large. I think I may be able to do something like that at the end of my time at the BSI, but that was one of the main problems that I had-- my aspirations for the type of project I could create were much higher than what I am able to achieve on my own at the moment.

I know I am very close to being able to create a third Facebook visualization, but I was getting caught up on HTTPS request syntax near the end. If I had more time I would get that data as well.

**Your social media "report"**

I was not able to conduct the original study that I planned on conducting, but I did study some other areas of Facebook using time based metrics. I am a typically-aged-college-student attending a major university, and I could be seen as a prime demographic for business looking to sell to. One could even say the data collected in this study could be used to create a *persona.* I am a singular person on social media, and only had myself to test on, but this study could be pursued further and applied to others if there was a need to do so. That being said, I am now able to display some inferences that can be made from the data.

The "big question" that can be answered from this study is which day of the week is Kyle most active on social media? And that day is Thursday. I created two different graphs. One for my

last 100 posts, and another for my past 1,000 posts. I am not able to complete my original study of seeing if there is a correlation to weather and facebook posts, and to be quite frank-- I am not sure that the metrics behind that study would be that useful anyways.

**Instructions to run code:**
Need to refresh FB Access token and insert it at the top. Also, if you would like to post it to your plotly account make sure replace the tokens given as well. If not the code should direct the user automatically to the plotly on my account.

**Documentation for each function you wrote (Code must be fully formatted and you must include ALL resources used.)**
Documentation / Resources used here
Plotly with visualizations here

FB word cloud with my most used words on FB posts of all time. (Did not make with code, simply copied and pasted into an online generator)