Todd Gavin

DSCI510  
2 December 2022

Homework #3

Task:

**DSCI 510: Principles of Programming for Data Science**

Fall 2022 Homework 3  
Data Collection  
**Due: 12/2/2022 23:59 PM PT**

Please submit a zip package of:

* A PDF, Markdown, or Jupyter notebook file answering the following 1 question. 5 points.
* Data collection code. 5 points.
* A small sample of the collected data. (No more than 10 MB). 5 points.

**Note:** I have switched the token that I am colleting pricing data on from Ethereum to the MATIC token. Everything else is the same.

**Link to GitHub Repo:** <https://github.com/todd-gavin/DSCI510-Final-Project>

* What data did you collect?

I collected transaction data from a major crypto wallet that trades the MATIC token very frequently. I also collected the daily pricing data of the MATIC token.

* How many different sources did you use?

I used two different data sources. I used the Etherscan API to collect the transaction data from the crypto wallet and I used the Python Historic\_Crypto library to collect the pricing data for the MATIC token.

* How many data samples did you collect?

I collected about 2500 individual transactions for the single crypto wallet and I collected about 60 day’s worth of MATIC token pricing data.

* (Similar to Homework 2 Q2, but now you should answer based on your collection progress, rather than just your plan). 5 points.

Rubric:

1. The data should:
   1. Specify the general nature of data, e.g. weather, hotel price, airfare, etc. 1 point.
   2. Specify exact data sources, e.g. a link to the dataset, a link to an API, or a link to a website to parse. 1 point.
   3. Have 2 or more data sources. 1 point.
   4. The data source should be large and recent. It should contain at least 100 samples (recommends 1000 samples or more), and is no older than 10 years from now. 2 points.
2. The data collection code should:
   1. Show your progress on data collection. You don’t have to finish all the work by then. 4 points.
   2. Have a link to your github repository. If it’s a private repository, you need to add mail@g1eb.com and yuzhongh@usc.edu as your collaborator in the repo settings. 1 point.
3. The sample data should:
   1. Have a description about the original data format, e.g. For structured datasets, specify its format. For API, specify what keys you are collecting. For Web parsing, specify what elements/attributes you are parsing. 2 points.
   2. Have a description about the saved data format. e.g., you save them as a CSV/JSON/XML file and describe its format; you save them in SQL/NoSQL database and describe its schema. 3 points.