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ECS 163

Project 2

Cryptocurrency Data Visualization

My dashboard showcases a variety of cryptocurrency price data, first showing the trends in price over time with a candlestick chart. This candlestick chart can be manipulated with the box below it; click and drag in the box to redefine the range of data shown. One can also change which coin the candlestick chart showcases by using the form on the right side of the page. This chart is particularly good at showcasing the drops and rises in a currencies value. For example, from looking at Bitcoin's historical data, one can see that in early 2014 the currency was trending downward for the first quarter of the year, as most of that segment is shown in red. This was shortly after Bitcoin hit $1,000 for the first time, and the "bubble" burst. This method of showing change in value is also easier to read than a standard line chart; the rectangles clearly match up to an individual day, with no slope or continuous line to make the data ambiguous. The color here also aids with this lack of ambiguity.

The second visualization is a slightly more detailed scatterplot. It shows up to the 10 different currencies that this dashboard examines and compares the overall volatility of their value for a given day. In order words, the difference between the highest value of the day and the lowest value of the day. It also shows the volume of transactions that each currency had in a day through the radius and color of each of the dots. The date it analyzes is whatever date is in the middle of the range selected with the brush directly under the candlestick chart. In most cases, this seemed to give a good impression regarding the relative performance of the active currencies at the time. For example, one can see that in much of mid 2017 Ethereum was able to come close

to rivaling the volume of transactions that Bitcoin perpetually has when compared to nearly every other currency. You can also see that Bitcoin Cash, due to the higher overall value, is able to come closer to Bitcoin's spread over a day, at least on some days. Bitcoin rarely moves from the cap of this graph, which serves as a good benchmark for all other currencies to perform against.

For my final visualization, I have opted for a simple line graph comparing the histories of each of the cryptocurrencies, and it does showcase the similar trends in a different way than the scatterplot variant does. My candlestick graph is good at showing changes in one line, but it would rapidly become cluttered and hard to read if multiple lines with similar detail were included. However, it can still be useful. For example, we can see that in the recent crash in Bitcoin's value, other cryptocurrencies were not hit nearly as hard with a dip. I did play with a logarithmic scale, which showcased the changes in the small currencies much more easily, but it erased a lot of the larger changes. The previously mentioned crash is barely visible in a logarithmic mode, which made it less useful.

The feedback I received from a fellow student is all feedback I found myself agreeing with. They managed to find many issues that I had yet to find, such as an issue with the time scale failing resize to fit newer coins, leading to the candlestick chart displaying nothing. The main other piece of feedback I received was that they would have appreciated more polish overall. Things like multiple tick marks very close together on the scatterplot would have been nice to have avoided. They also mentioned that the source of the data for the modified scatterplot could be clearer. The student providing feedback did not specifically mention a desire for tooltips showing values, but I know I find myself wishing to be able to see the precise value on a graph by placing the mouse over it, as it is not necessarily readable now.