

I found that on average, housing prices in fifteen of London's thirty-two boroughs increased more than four-fold during the two decades from 1998 to 2018. The largest increase occurred in the Borough of Hackney, of which I had never heard. It turns out to be one of the most expensive places to live in the entire UK! It lies in the East part of London, which generally has a very high crime rate! It is known for its vibrant nightlife and its arts scene.

I arrived at my conclusion by following the process outlined in each Tier of the Challenge, in due course. That is, I worked successively through Tiers One, Two and Three, respectively.

For the most part, this went smoothly. I did encounter a couple of difficulties. Most notably, the syntax provided for the "groupby" method for a DataFrame object did not seem to work. Moreover, after I was able to provide the correct syntax, I discovered that the resulting object was no longer a DataFrame!

In the end, I was able to fix all of these problems after doing a few Google searches.

I also discovered that some features that were supplied in the three respective Jupyter Notebook files have been deprecated in the current version of JupyterLab. I will have to review these so that I don't get bitten in the future!

Finally, the JupyterLab interface is obviously to be preferred over the old-fashioned Jupyter Notebook interface. But it is NOT documented in any convenient source!--with the SOLE exception of *Python Tools for Scientists* by Lee Vaughan (No Starch Press, 2023). This book does everything right! It begins by showing how to install everything that one needs using Anaconda. It continues by describing how to keep organized with Conda Environments; how to do scripting with the Jupyter Qt Console, with Spyder, with Jupyter Notebook, and finally with JupyterLab.

I should also note that I just received this book yesterday, and today I learned from it about GitHub Desktop--which I will be using to submit this very document!

The remainder of this invaluable reference describes how to accomplish almost anything that a scientist (of any stripe!) would want to do within the Anaconda ecosystem.

I have spent several hundred dollars on books relating to Python, and this one is by far the best!

I would just as soon throw most of them away!--with one VERY NOTABLE EXCEPTION! Namely, *Python 3--The Comprehensive Guide*, by Johannes Ernesti and Peter Kaiser (Rheinwerk Computing, 2022). This is the most comprehensive reference on "pure" Python of which I am aware. It could also serve as a textbook and in fact has been used by its authors as the textbook for courses at the Karlsruhe Institute of Technology in Germany since 2015. Both authors hold doctoral degrees in mathematical sciences and they write with the precision that

one would expect! Moreover the treatment is very thorough as one would probably expect from German authors!

I would go so far as to claim that these two books are the only ones one needs--or even worth having!--for the core topics of Python 3 and Anaconda.

Of course one would also want and need other books on related topics, such as Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, Tensorflow, PyTorch and so on.