Reflection: FileIO, Benchmarking and RegEx: Arnav Krishnan

After completing the MyFileIO and Benchmarked File Access project, I found it quite interesting how the method of file access can impact efficiency and time spent. Before I did this project, I had assumed that reading and writing files were fairly straightforward, and roughly equal in speed no matter how it was done. However, seeing clear differences between File R/W and Buffered R/W was very cool.

One question I still have is how to optimize the time spent on File I/O; for example, you mentioned turning off wifi to stop incoming packets. How else can we read and write to files as past as possible. I also wonder how different coding languages "buffer" the file writing /reading process behind the scenes.

As we started using Regex, I was very impressed with how powerful it was. It was very cool to see how compact they were (a single expression can do complex string matching and transformations). I also found the real-world applications, such as validating Phone Numbers, emails, or SSNs very useful.

However, I found them very hard to write and debug. Even a small syntax error of 1 or 2 characters can completely change the meaning of the expression, and it is painfully difficult to diagnose issues. I had to use the online regex tester, which made it easier, but still tricky.

One thing I still wonder is how we can optimize regex performance, and how it scales for larger /smaller datasets. I also wonder how different coding languages process regex.