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Computer Science 224

Dr. Sprint

File Socket Fun

One of the biggest rising industries within Computer Science is cloud servers. The Cloud, as it is affectionately called, is a means of external storage via a server, and has become widespread both professionally and commercially, with some consumer favorites being Google Drive, Dropbox, and Microsoft Office Online. Like many technological advancements, it has quickly become an expected part of the computer experience, with much of the difficulty and labor taken for granted among sleek user interfaces, and flawless server experiences.

One of the essential aspects of a cloud server is images, specifically the ability to transfer images to and from the server, and this is rightfully taken for granted by the system’s users. Yet, image transferring is anything but easy. A standard image is considerably larger than the standard TCP package, and ignoring industry standards in this case may overload the socket.

This dilemma raised a question with us. If images are too large to send in a standard package, then how are they sent? And how do programs like FileZilla handle server communication?

Our goal in this project is to answer this question through mimicking the GUI of PuTTy, a common SSH client, to better grasp the under workings of common software and their utilization of the Cloud.

We hope that this project might influence other students who are interested in any computer science subject that would utilize or implement servers, whether that be in Security, Rest APIs, Cloud computing, etc. to attempt a similar project on their own.