Unit 4 Reflection

In this unit, we focused on Python data structures with an activity to consider a technology via the IEEE Spectrum website. From there, to select a technology, consider developing the technology and eliciting requirements based on the technology, giving attention to Python data structures. I found it challenging to select a product from the IEEE website because many of the topics presented did not seem to be software-oriented but rather more hardware-oriented. Eventually I settled on Mojo Vision's AR Contract Lens. Mojo Vision is a young start-up working on bringing augmented reality via ocular lenses to market. Their working prototype must solve several challenges, prime of which are battery, wireless connectivity, resolution, and breathability. According to the IEEE article, they are achieving each milestone slowly, but I do not think we will see AR lenses until the year 2024. Reading further beyond Mojo Vision, I was intrigued to discover that AR lenses is not a brand new concept by competitors such as eVision. Yuan et al. (2020) consider the role electronic contact lenses might play in detecting vital signs such as glucose levels and conditions such as glaucoma.

I found the activity to identify Python data structures both interesting and challenging. Interesting because it presented opportunity to consider *how* does the chosen program work, and *with what* data structures would it work. I identified three main types of data, namely a Hash map, sets and queues based on the programs requirement (assumed) to uniquely identify blocks of data sent across the wire to its hosting server and the manner it which to process those blocks (queues). I did not document the *obvious* data structures, like "integers", "floats", "strings" or "arrays of bytes" because I consider these data structures to be so fundamental to every program, that it is not worth listing separately.

References

Yuan, M., Das, R., Ghannam, R., Wang, Y., Reboud, J., Fromme, R., Moradi, F. & Heidari, H. (2020). Electronic contact lens: A platform for wireless health monitoring applications. *Advanced Intelligent Systems*, *2*(4):1900190.