**Sprint 2 Retrospective**

**What went well**

* We successfully developed a GUI with our python program to allow selection of an Excel file containing manufacturer names and part number from the user’s computer.
* Implemented a feature in the GUI to allow selecting specific ranges in the excel file, enabling the program to execute on selected rows instead of the whole file.
* Created a .exe file of the program ,allowing for cross-platform compatibility on different operating systems.
* Refined image search query to improve accuracy by building a separate search algorithm for context URLs with manufacturer part numbers.
* Added security upgrades to ensure file safety and protect the user’s files when browsing their local computer from the GUI.

**What didn’t go well**

* Retrieving 100% accurate images continues to be a challenge as some result are unrelated to the part number and product information.
* After redefining the search for context URLs, inconsistencies in manufacturer naming and sites is leading to additional mismatches in final image results.
* Confusion still remains around filtering and finding accurate images even with specific search query terms.

**What could be improved**

* Better implementation of advanced filtering, such as more parameters, can help match the images with the part numbers more reliably.
* Runtime can become inefficient when selecting large Excel ranges, suggesting the need for more optimization in our search logic.
* Sponsor communication can be improved as often times, questions or concerns require internal coordination on their end which slows down our progress.

**Challenges**

* Creating the GUI using python was initially challenging as most of our team had limited experience with GUI development in Python.
* Integrating the context URLs was complex due to the wide variety of manufacturer sites and their naming schemes.
* Figuring out how to store all the images we fetch onto Google Cloud was a challenge which we are currently working to figure out.