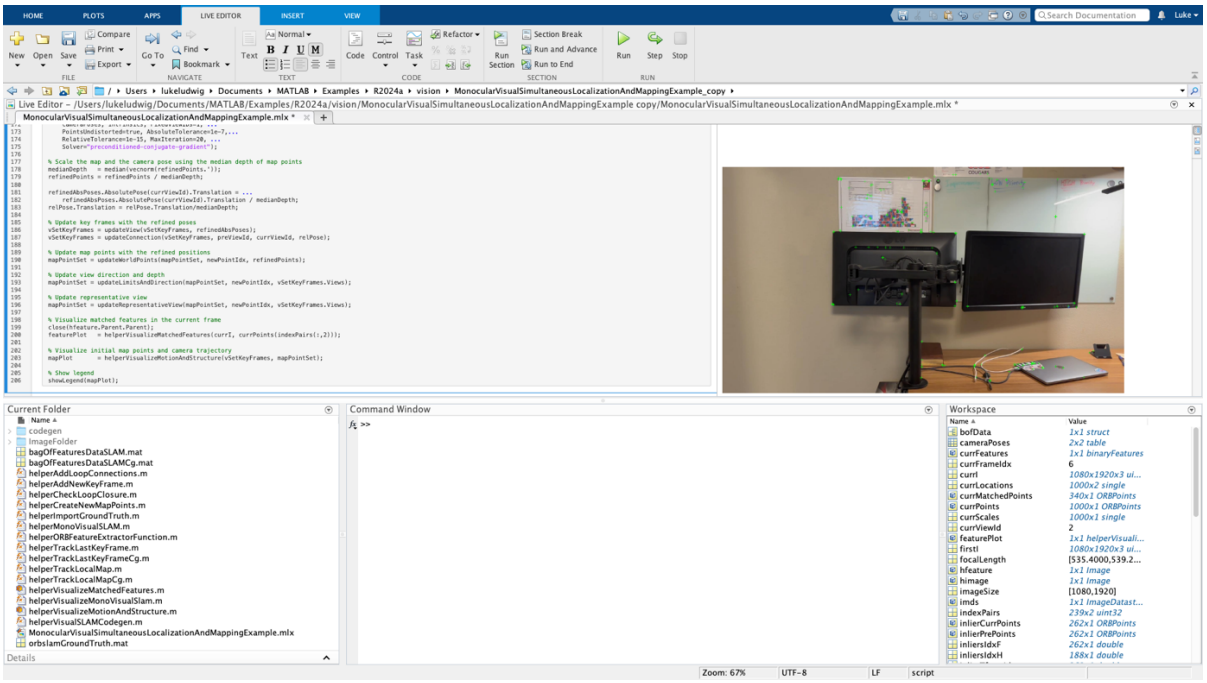
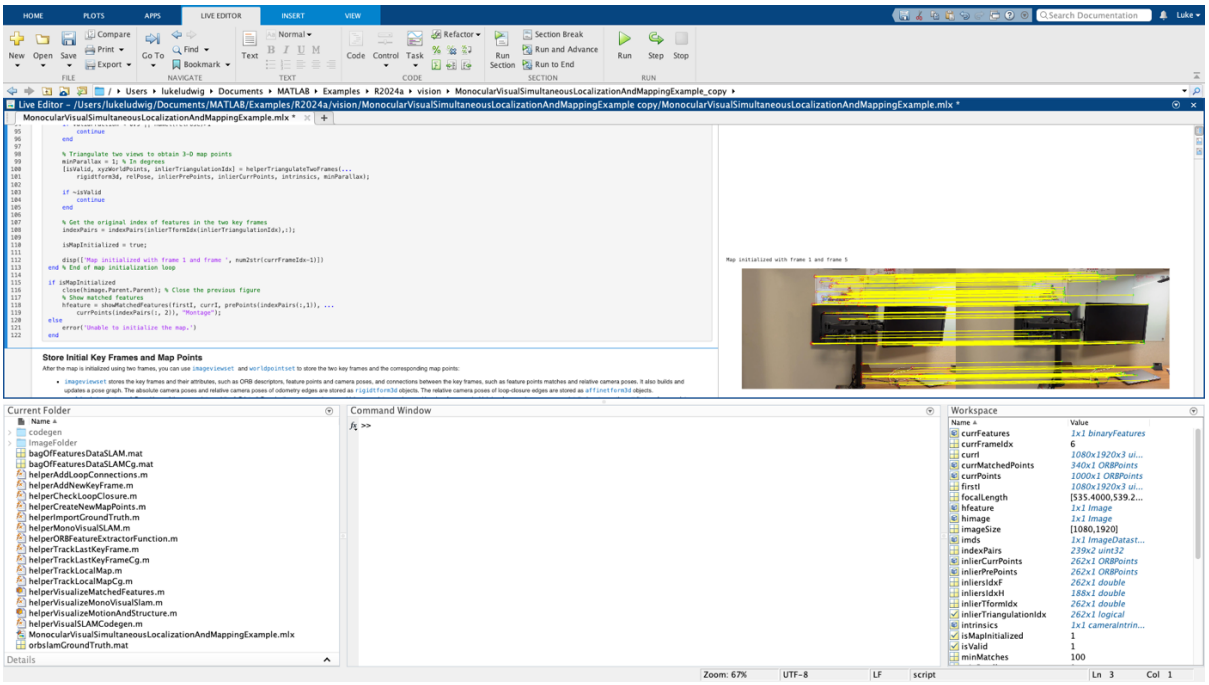
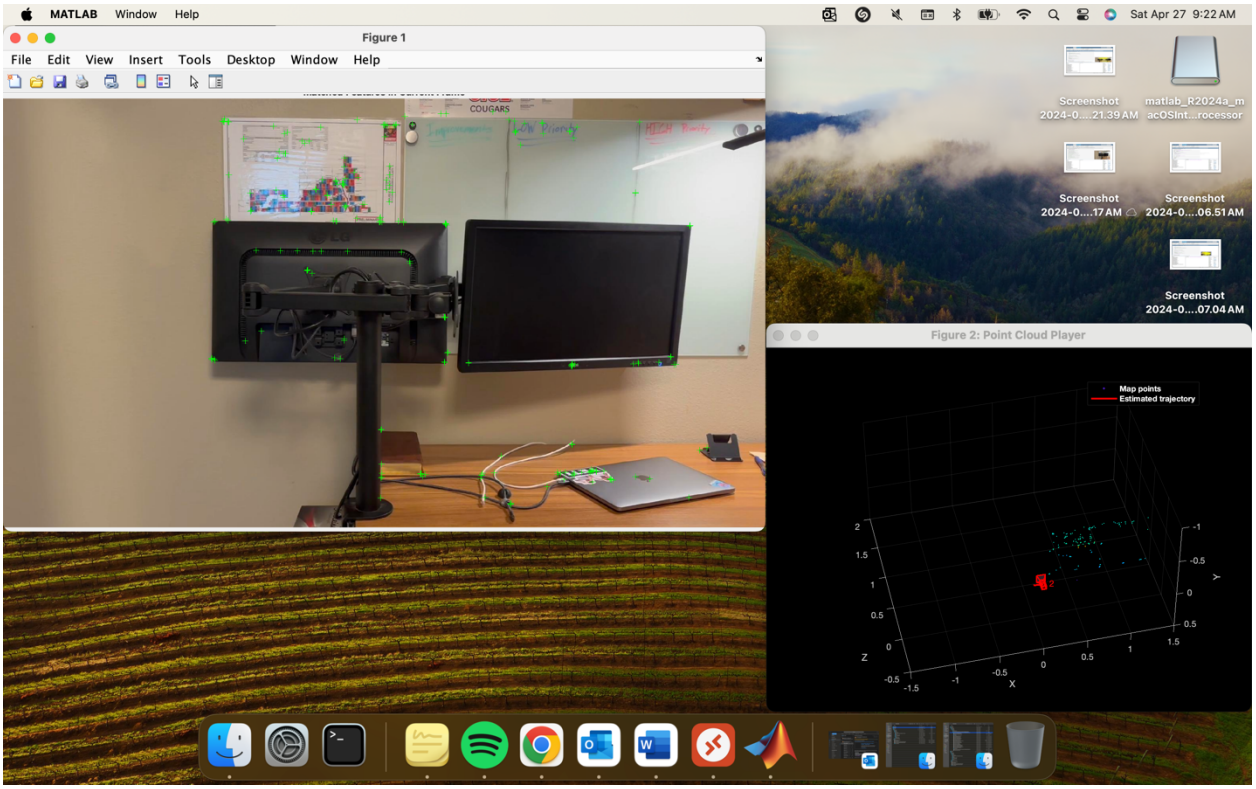
Step 2 Summary

The second step took a lot of time to figure out since the creation of a dataset was not outlined and there was little to no information when I searched google. I came up with a solution in MATLAB which took my mp4 video file and saved a frame after every 15 frames. This was inspired by MATLAB since they acquired key frames after every 20 frames for a 30-fps camera. I intended to include the rawVideo.mp4 file in the GitHub repository but the file size was too large. I saved the key frames into a file folder and saved them in an accessible location for MATLAB to access to perform analysis. The first section of code and its output is shown below.

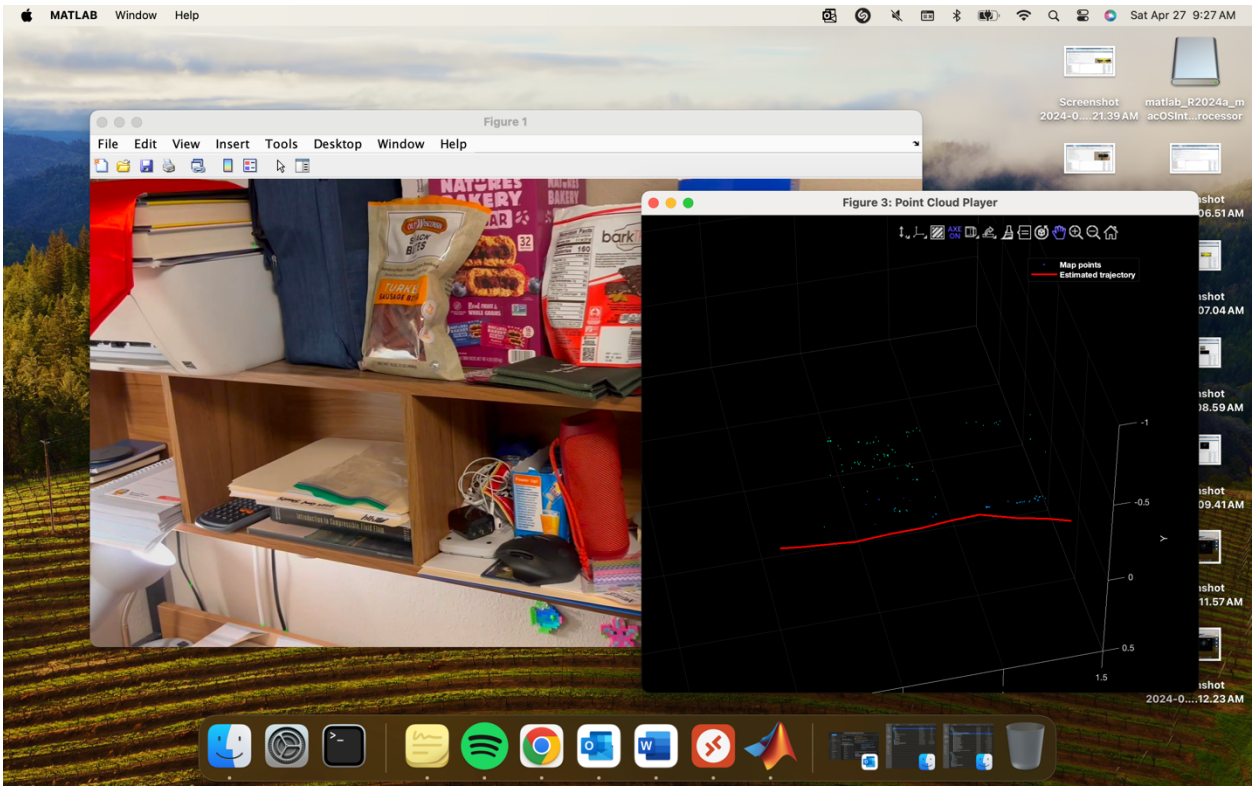




Continuing onto the next section and its output,



Finally, we continue onto the next section, which was the tracking section and its output,



Unfortunately, MATLAB stopped its analysis after 20 or so key frames. I tried to resolve this issue, but with limited time it would have been too complex and time consuming. The issue probably lies within the image data itself. The raw video was over a minute and a half long with more than 2600 frames which seemed to be an issue for MATLAB's computational capacity. It could have also been my computer as well. My MacBook Pro is starting to get worn down. The texture of the photos is also relatively complex and there are a lot of objects within them as well. If I had time to redo it, I would create a much simpler scene and make the raw video much shorter.