Photogrammetry miniproject

You are provided with a set of images recorded in the fall of 2017. You are tasked with counting number of pumpkins within that field. You can choose software to create orthomosaic, though code implementation should be in python.

Within the process you have to:

- calculate bundle adjustement,
- create Digital Elevation Model,
- orthorectify images and create orthomosaic,
- design and implement big image handling procedure,
- detect and count pumpkins without duplicates.

Report should include:

- date, time and place of the data aquisition (EXIF)
- hardware information about data aquisition (UAV and camera) (again, EXIF)
- number of images and approximate overlap of images (look for processing report in the software)
- processing information - what parameters were chosen, GSD for orthomosaic, etc.
- size of resultant orthomosaic (resolution and disk size)
- description of tile handling algorithm,
- description of handling outide of the fence data,
- screen shots of resultant DSM and orthomosaic,
- sample images with results of counting,
- number of counted pumpkins,
- conclusions.

The handin should include raport in single pdf and created python files. Please (for the love of allmighty) don't include resultant image data. Upload the handin by midnight on 19th of March through SDU assigments.