

Hive Monitoring: Week 4

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Debugging

- Unreadable characters in log files
- Learned more about Linux commands

```
file, class, begin frame, end frame
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-10 17:27:37.449696.h264, , 31, 27036
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 11:22:09.977857.h264, , 31, 2095
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 11:25:43.578703.h264, , 31, 5807
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 11:43:39.732672.h264, , 31, 30007
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 12:03:40.244583.h264, , 31, 30008
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 12:23:40.748895.h264, , 31, 30008
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 12:43:41.291047.h264, , 31, 119
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 12:45:06.429300.h264, , 31, 30007
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 13:05:06.944680.h264, , 31, 30008
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 13:25:07.486064.h264, , 31, 30008
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 13:45:08.029694.h264, , 31, 1511
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 13:47:53.040274.h264, , 31, 30006
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 14:07:53.502449.h264, , 31, 30008
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 14:27:54.044607.h264, , 31, 30008
/research/projects/grail/rmartin/bee-videos/garage/2023-06-19_2023-06-22/2023-05-11 14:47:54.585695.h264, , 31, 12421
```

```
20230619_123456
20230619_123526
20230619_123556
20230619_123626
^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@20230619_124347
20230619_124417
20230619_124447
20230619_124517
20230619_124547
20230619_124617
20230619_124647
20230619_124717
20230619_124747
20230619_124818
20230619_124848
20230619_124918
20230619_124948
20230619_125018
20230619_125048
20230619_125118
20230619_125148
^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@^@20230619_125458
20230619_125528
20230619_125558
20230619_125628
20230619_125659
```

```
readarray -t all_state_switches <<( grep --no-filename . $target/*.txt |sed "s/[^0-9_]//g" | sort -n )
```

Control Data Results

Accuracy: 0.7570000269490932

- Expected 50% accuracy
- Determined that there could be an issue with the distribution of the data

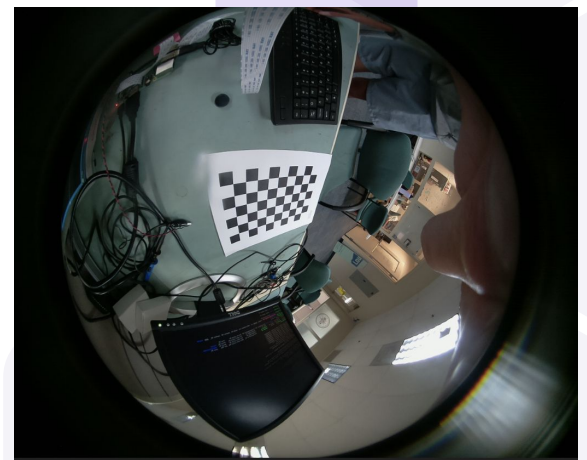
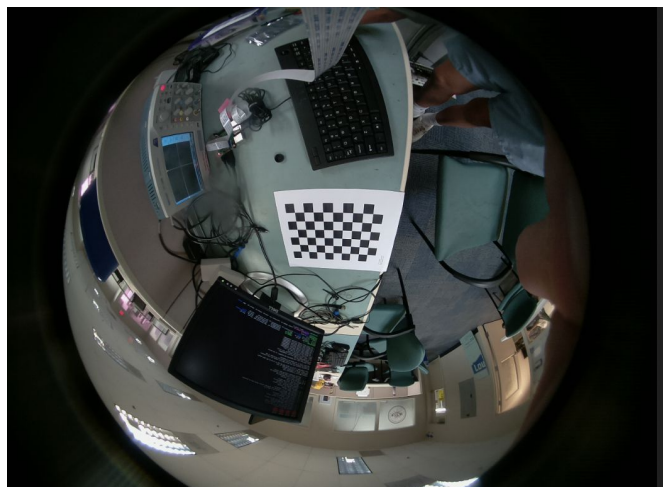
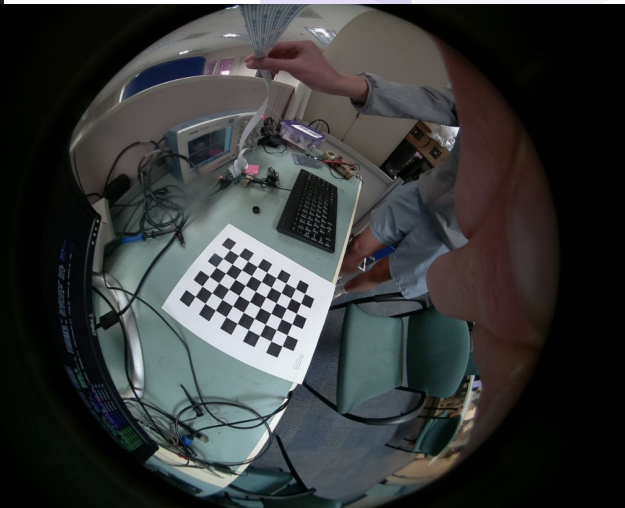
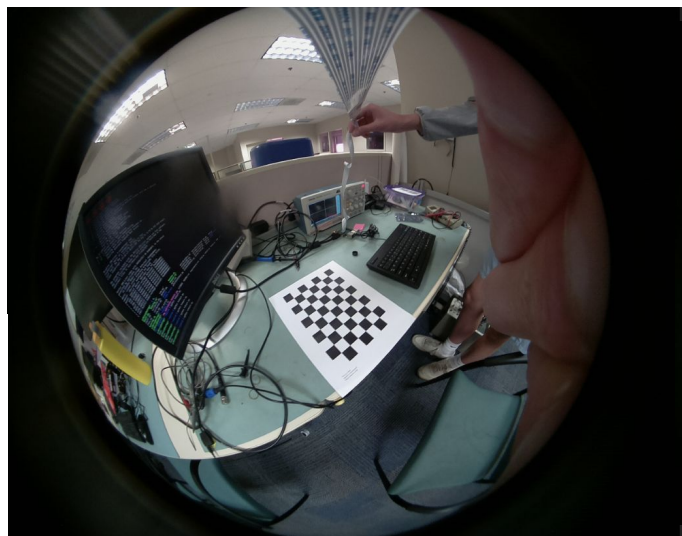


Reviewed Data

- Created a spreadsheet to manually verify states



| Size | Month | Day | Time | Time Difference | | State | | logPos | logNo | logNeg |
|------|-------|-----|-------|-----------------|------------|-----------------------|----------------------------------|-----------------|-----------------|-----------------|
| 306M | Jun | 21 | 16:12 | 0:20 | 2023-06-21 | 15:52:40.257169.h264' | off -> on (15 pin on) | 20230621_155242 | | |
| 296M | Jun | 21 | 16:32 | 0:20 | 2023-06-21 | 16:12:40.758338.h264' | on (15 pin on) | | | |
| 297M | Jun | 21 | 16:52 | 0:20 | 2023-06-21 | 16:32:41.258248.h264' | on (15 pin on) -> on (16 pin on) | | | |
| 297M | Jun | 21 | 17:12 | 0:20 | 2023-06-21 | 16:52:41.757825.h264' | on (16 pin on) | | 20230621_165242 | |
| 300M | Jun | 21 | 17:32 | 0:20 | 2023-06-21 | 17:12:42.295505.h264' | on (16 pin on) | | | |
| 303M | Jun | 21 | 17:52 | 0:20 | 2023-06-21 | 17:32:42.832464.h264' | on (16 pin on) | | | |
| 303M | Jun | 21 | 18:12 | 0:20 | 2023-06-21 | 17:52:43.331959.h264' | on (16 pin on) -> off | | | 20230621_175242 |
| 299M | Jun | 21 | 18:32 | 0:20 | 2023-06-21 | 18:12:43.871589.h264' | off | | | |
| 300M | Jun | 21 | 18:52 | 0:20 | 2023-06-21 | 18:32:44.409921.h264' | off -> on (15 pin on) | | | |
| 300M | Jun | 21 | 19:12 | 0:20 | 2023-06-21 | 18:52:44.945908.h264' | on (15 pin on) | 20230621_185242 | | |
| 301M | Jun | 21 | 19:32 | 0:20 | 2023-06-21 | 19:12:45.483605.h264' | on (15 pin on) | | | |
| 297M | Jun | 21 | 19:52 | 0:20 | 2023-06-21 | 19:32:46.022788.h264' | on (15 pin on) -> on (16 pin on) | | | |
| 296M | Jun | 21 | 20:12 | 0:20 | 2023-06-21 | 19:52:46.562006.h264' | on (16 pin on) | | 20230621_195242 | |
| 296M | Jun | 21 | 20:32 | 0:20 | 2023-06-21 | 20:12:47.020961.h264' | on (16 pin on) | | | |
| 295M | Jun | 21 | 20:52 | 0:20 | 2023-06-21 | 20:32:47.559116.h264' | on (16 pin on) -> off | | | |
| 294M | Jun | 21 | 21:12 | 0:20 | 2023-06-21 | 20:52:48.016792.h264' | off | | | 20230621_205243 |





Goals for Next Week

- Test the software
- Visit the hive and collect more data
- Learn more about AC circuits

