Performance Evaluation 2

* Criteria

Run several detector / descriptor combinations and look at the differences in TTC estimation. Findout which methods perform best and also include several examples where camera-based TTC estimation is way off. As with Lidar, describe your observations again and also look into potential reasons.

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| --- | --- | --- | --- | --- |
| FRAME  NO.1 | LIDAR  TTC | FAST+BRIEF | SHITOMASI + BRISK | AKAZE+AKAZE |
| 1 | 12.515600 | 12.515600 | 13.273751 | 11.610250 |
| 2 | 12.614245 | 11.941005 | 12.186040 | 13.580508 |
| 3 | 14.091013 | 11.772672 | 12.484316 | 13.385155 |
| 4 | 16.689386 | 12.632132 | 13.533768 | 13.558591 |
| 5 | 15.746544 | 17.231465 | 12.660245 | 14.708744 |
| 6 | 12.678716 | 11.571182 | 12.956788 | 14.219493 |
| 7 | 11.984351 | 10.973631 | 15.031105 | 15.766173 |
| 8 | 13.124118 | 12.364261 | 11.635362 | 14.617150 |
| 9 | 13.024118 | 12.497190 | 12.490551 | 14.767623 |
| 10 | 11.174641 | 12.516846 | 11.745067 | 11.729622 |
| 11 | 12.808601 | 13.501145 | 12.172158 | 13.068296 |
| 12 | 8.959780 | 12.170352 | 12.029267 | 10.935750 |
| 13 | 9.964390 | 13.027298 | 13.607712 | 11.169794 |
| 14 | 9.598630 | 11.488006 | 12.724981 | 11.493294 |
| 15 | 8.521566 | 12.208446 | 12.808526 | 10.137821 |
| 16 | 9.451637 | 11.525555 | 9.734544 | 10.304318 |
| 17 | 9.546581 | 10.431682 | 12.677023 | 9.801430 |
| 18 | 8.398803 | 10.123832 | 10.713309 | 9.294621 |

Best combination : AKAZE detector and AKAZE Descriptor, the camera TTC that is generated by this combination is the most convenient with the lidar TTC time.

But taking the processing time in consideration, I will choose FAST-BRIEF combination, as it generates good results in much less time.