Udacity

Camera Midterm Project

Building a reliable collision avoidance system is heavily dependent on the execution time. Choosing the top three combinations will depend to the execution time in the first place. In addition, we will take into consideration having a sufficient number of points in order to detect the preceding vehicle reliably in different conditions.

The top three detector/descriptor combinations are:

- Detector: FAST + Descriptor: ORB
- Detector: FAST + Descriptor: BRIEF
- Detector: FAST + Descriptor: BRISK

Table 1 Top three detector/descriptor combination

Detector	Descriptor	Execution time (ms)	#Points
FAST	ORB	28	1071
FAST	BRIEF	33.1	1099
FAST	BRISK	36.4	776

In general, all other detector/descriptor combinations resulted in comparable number of points while having much larger execution time, or resulted in much more points with much larger execution time.