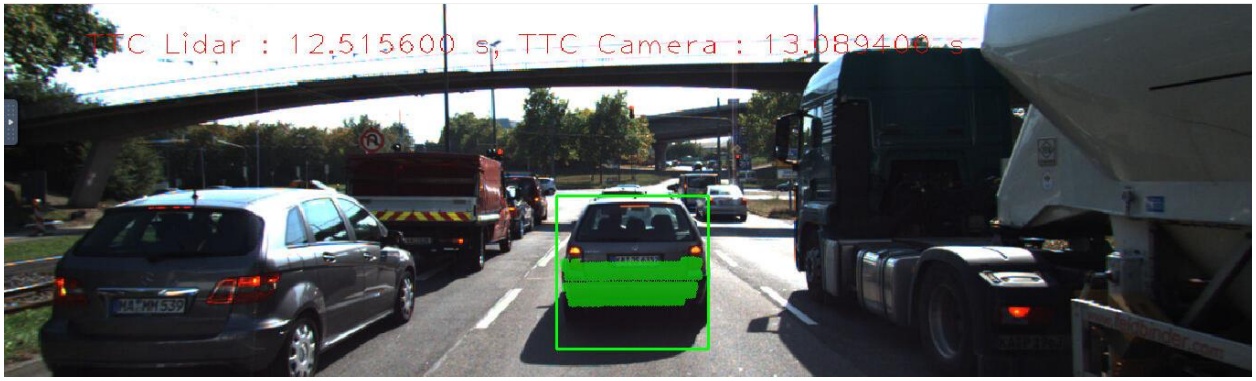
LIDAR & Camera Fusion To Estimate TTC of 3D Objects



Analysis of different algorithms for 3D Object Tracking and estimating TTC can be found in **/home/workspace/SFND_3D_ Object _ Tracking/Analysis /Analysis.pdf.**

Generated different graphs using python script located at **/home/workspace/SFND_3D_ Object _ Tracking/Analysis /AnalysisGraphs.py.** Generated Graphs for analysis are saved in same **/home/workspace/SFND_3D_ Object _ Tracking/Analysis /Graphs.**

Visualization can be turned on/off using the boolean **bVis** in FinalProject_Camera.cpp

Source Code will generate two reports in **/home/workspace/SFND_3D_Object_Tracking/report**.

1. Report.csv – Overall Report for all combinations of algorithms for each image
2. Summary.csv – Contains overall summary of all algorithms

FP.5: Performance Evaluation 1:

There are not many instances where TTC computed by LIDAR is inaccurate. it is accurate as Median is being used for estimation of TTC. It seems to be slightly inaccurate in the cases where number of Key Points detected by Algo (Detector + Descriptor) are less. Obviously, feeding less number Key Points for measurements will lead to reduced accuracy in estimation of TTC. But most of the times.

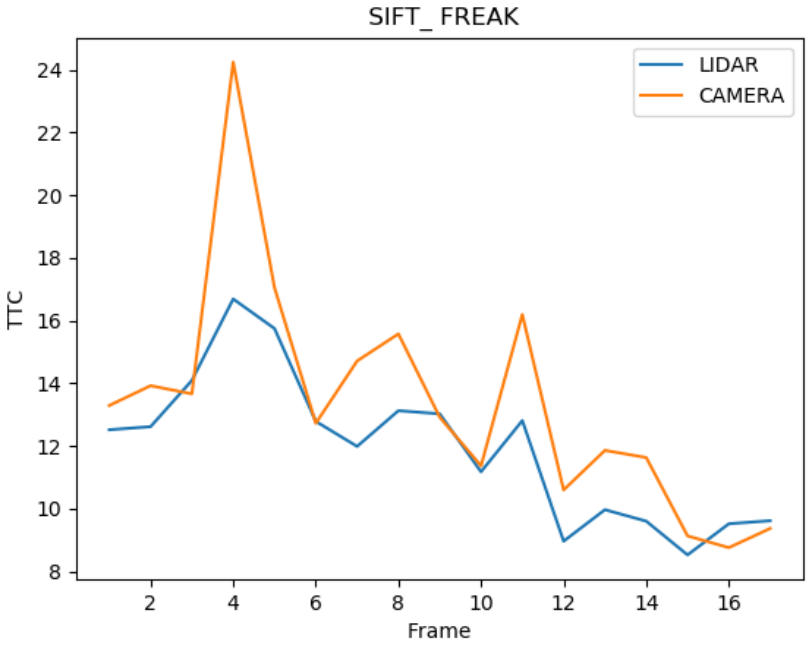
FP.6: Performance Evaluation 2:

Top 3 Detector/ Descriptor as per analysis on generated report are below. These are highlighted with Green Color in Analysis.pdf.

1. SIFT/SIFT
2. SIFT/FREAK
3. SHITOMASI/BRISK

SIFT/SIFT

SIFT/FREAK



SHITOMASI/BRISK