Pedestrian Detection with IR, RGB, and LiDAR

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Project goal: To get a self driving car to be able to detect pedestrians with a reasonable amount of accuracy using different technologies that cover a wide range of situations

Datasets: We will use the provided car_IR_RGB_lidar dataset as well as freely available datasets of people that we find online to train our detection algorithm. We will be collecting our own data after we have tested our project on the provided dataset.

Software Packages: RVIZ to display LiDAR and IR data. Python applications for CV and data analyzing.

Hardware Sensors needed: IR sensor, LiDAR sensors, camera set up for RGB CV

Qualitative or quantitative evaluation on different datasets: We will be evaluating and comparing our algorithm on different data sets, as well as our own dataset to analyze its robustness

Project Division: Luke will focus on the RGB computer vision, Lucas will focus on the IR sensor computer vision, Uday will focus on the LIDAR sensor, and Arvinder will focus on integrating the data from different sensors.