Twizy Project Documentation

Group Members:

Vasu Bhog, Kyle O’Connor, Benoît Chauvière

Goal:

Recognize and Detect Road Signs in Real Time.

Possible Steps:

UML Diagram

G.U.I

Image Processing Code

DataBase (S.Q.L)

JUnit Testing

Learn about OpenCV, Image Processing, Real Time Data Proccessing, Computer Vision Techniques.

Background:

Autonomous vehicles and robots need to perceive their environments

Including other vehicles, objects, pedestrians, signs

Perceive -> Analyze –> Act

The detection and recognition of road signs is essential for the movement of vehicles on the roads

We will use several on-board data acquisition sensors

On-board cameras 3D -LIDAR

Lastly our goal is the analysis of captured images to detect shapes and objects in the vehicle environment

Enviornment and Tools: -Twizy Electric Vehicle -GoPro Hero Camera -Test Road Signs

Further Work: Studying of object detection and recongition algorithms (MATLAB, OpenCV Library, and Java Programming) Machine Learning Algorithm combination with current implementation