Car + Sensors

car.py + arduino_utils
Node

- Arduino Interface

camera
Node

- Sends images continously

Middleware

driver.py
Node

- Gets data
- Sends data to NN
- Gets NN output
- Sends scaled/formatted commands to car

Backend decision-making

nn.py
Node

- Gets data & sends to preprocess service
- Invokes NN defined elsewhere
- Returns direction & speed

data_preprocessing.py
Service

- Formats data for NN
- ex. numpy to pytorch tensor
- ex. keeps list of 10 imgs

/zed/depth/depth_registered

(Data from car.
In this case, zed image)

/bdd/car_data

raw data (ROS Service Request)

Formatted Data (Response)

/bdd/NN_output

BDDControlMsg

Other components

User Settings (Params)

Logs (rosbags)

Hand-held remote

Navigation input for NN

Made on lucidchart.com