Drone Dataset

Format is based on the InD Dataset (https://levelxdata.com/wp-content/uploads/2023/10/inD-Format.pdf)

Recording Meta Information <videoID>_recordingMeta.csv

Name	Description	Unit
recordingId	Recording name	-
frameRate	Recording frame rate	fps
referenceFrame	Frame id used to label lane segments. The reference frame is saved as <videoId>_background.jpg	-
weekday	value set to 0	
startTime	value set to 0	
duration	value set to 0	
numTracks	value set to 0	
numVehicles	value set to 0	
numVRUs	value set to 0	
latLocation	value set to 0	
lonLocation	value set to 0	
xUtmOrigin	value set to 0	
yUtmOrigin	value set to 0	
orthoPxToMeter	value set to 0	
px2meter	Scale factor to convert pixel units to meter	m/pixel
p1x, p1y, p2x, p2y, p3x, p3y, p4x, p4y	xy-coordinates of the labelled landmark in the `referenceFrame`	pixel

Track Meta Information <videoID>_tracksMeta.csv

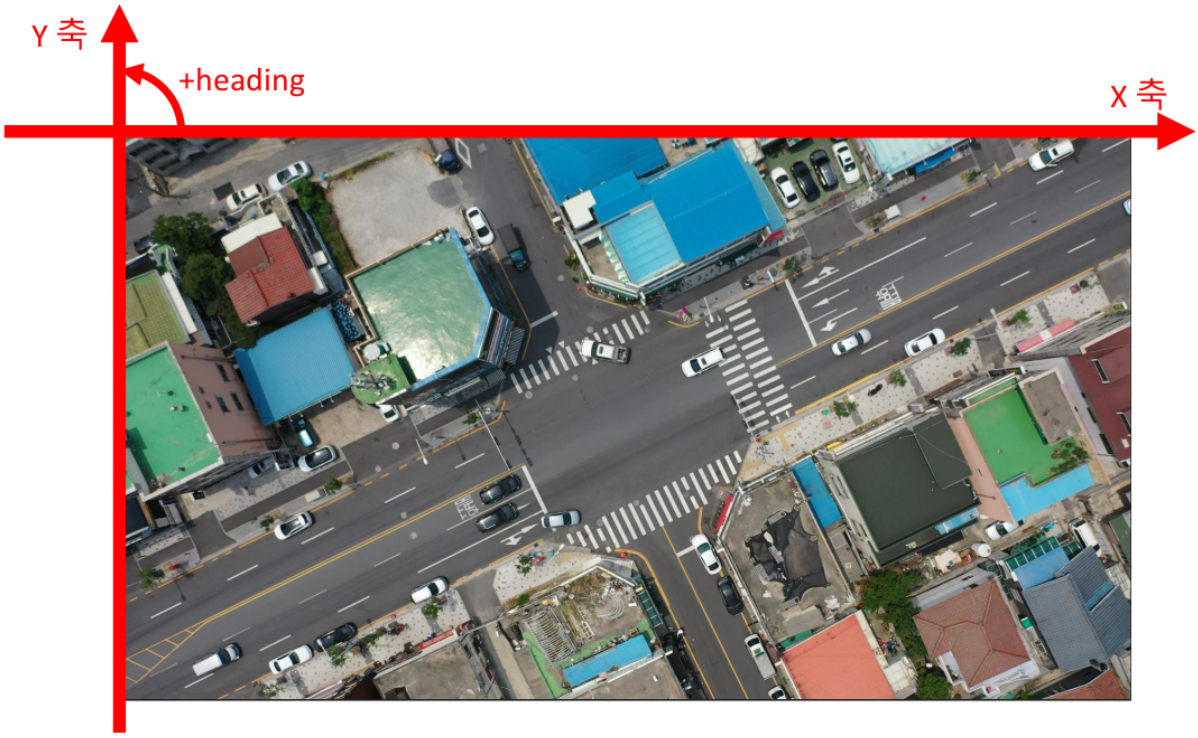
Name	Description	Unit
recordingId	Recording name	-
trackId	Id of tracked object	-
initialFrame	The frame when tracked object first appear	-
finalFrame	The final frame the tracked object is seen	-
numFrames	Number of frames the tracked object is seen	frame
width*	Width dimension of bounding box	m
length*	Length dimension of bounding box	m
class	Class of the tracked object. Available classes are `car`, `parked_car`, `bicycle` and `pedestrian`	-

*Only car and parked_car classes have size information.

Tracked Objects Information <videoID>_tracks.csv

Coordinate information

$$(x_{meter}, y_{meter}) = (px2meter \times x_{pixel}, px2meter \times (-y_{pixel}))$$



Name	Description	Unit
recordingId	Recording name	-
trackId	Id of tracked object	-
frame	Frame at which labeling is performed	-
trackLifetime	Number of frames from when object was first seen to current frame. (0 for `parked_car`)	frame
xCenter	x-coordinate for the center of the object	m
yCenter	y-coordinate for the center of the object	m
heading	Heading of the object	deg
width*	Width dimension of bounding box	m
length*	Length dimension of bounding box	m
xVelocity	x component of the object velocity	m/s
yVelocity	y component of the object velocity	m/s

$$
\begin{aligned}
&if\ class(trackId_i) == parked\ car \\
&\quad xVelocity_i = 0 \\
&else \\
&\quad if\ trackLifetime_i == 0 \\
&\qquad v_{next} = \frac{xCenter_{i+1} - xCenter_i}{0.1} \\
&\qquad v_{prev} = v_{next} \\
&\quad elseif\ trackLifetime_{i+1} == 0 \\
&\qquad v_{prev} = \frac{xCenter_i - xCenter_{i-1}}{0.1} \\
&\qquad v_{next} = v_{prev} \\
&\quad else \\
&\qquad v_{prev} = \frac{xCenter_i - xCenter_{i-1}}{0.1} \\
&\qquad v_{next} = \frac{xCenter_{i+1} - xCenter_i}{0.1} \\
&\quad xVelocity_i = \frac{v_{prev} + v_{next}}{2}
\end{aligned}
$$

Map information <videoId>_mapSegmentation.csv

This file contain coordinate information, in pixel units, of the points that make up each lane segment polygon.