

RISEE Dataset

1. Trajectory Data (sceario_xx.csv)

This file stores the time-series information for each driving scenario, covering the motion trajectories of both the ego vehicle and surrounding vehicles.

Name	Description	Unit
Frame	Current frame	[-]
Time(MS)	Timestamp of the current frame	[ms]
Ego_Type	Type of the ego vehicle	[-]
Ego_SizeX(M)	Length of the ego vehicle	[m]
Ego_SizeY(M)	Width of the ego vehicle	[m]
Ego_SizeZ(M)	Height of the ego vehicle	[m]
Ego_PosX(M)	X coordinate of the ego vehicle	[m]
Ego_PosY(M)	Y coordinate of the ego vehicle	[m]
Ego_RotZ(R)	Yaw angle of the ego vehicle	[r]
Ego_Speed(M/S)	Velocity of the ego vehicle	[m/s]
Ego_LinearVelocityX(M/S)	Velocity in X of the ego vehicle direction	[m/s]
Ego_LinearVelocityY(M/S)	Velocity in Y of the ego vehicle direction	[m/s]

Ego_LinearAcceleration X(M/S2)	Acceleration in X direction of the ego vehicle	[m/s ²]
Ego_LinearAcceleration Y(M/S2)	Acceleration in Y direction of the ego vehicle	[m/s ²]
Actor_n_Type	Type of the surrounding vehicle n	[-]
Actor_n_SizeX(M)	Length of the surrounding vehicle n	[m]
Actor_n_SizeY(M)	Width of the surrounding vehicle n	[m]
Actor_n_SizeZ(M)	Height of the surrounding vehicle n	[m]
Actor_n_PosX(M)	X coordinate of the surrounding vehicle n	[m]
Actor_n_PosY(M)	Y coordinate of the surrounding vehicle n	[m]
Actor_n_RotZ(R)	Yaw angle of the surrounding vehicle n	[r]

sceanrio example:

Frame	Time(MS)	Ego_Type	Ego_SizeX(M)	Ego_SizeY(M)	Ego_SizeZ(M)	Ego_PosX(M)	Ego_PosY(M)	Ego_RotZ(R)	Ego_Speed(M/S)
1	16.666666	Truck	5.53	2.69	3.17	-161.897949	5.702563	6.274008	0.000012
2	33.333332	Truck	5.53	2.69	3.17	-161.897949	5.702563	6.274008	0.000012
3	50	Truck	5.53	2.69	3.17	-161.897949	5.702563	-0.009177	0.000003
4	66.666664	Truck	5.53	2.69	3.17	-161.897949	5.702563	-0.009177	0.000009
5	83.333336	Truck	5.53	2.69	3.17	-161.897949	5.702563	-0.009179	0
6	100	Truck	5.53	2.69	3.17	-161.702454	5.700889	-0.008566	11.500197
7	116.666664	Truck	5.53	2.69	3.17	-161.507401	5.69933	-0.007989	12.191597
8	133.333328	Truck	5.53	2.69	3.17	-161.287659	5.69771	-0.007375	12.926165
9	150	Truck	5.53	2.69	3.17	-161.055435	5.696139	-0.006762	13.660731
10	166.666672	Truck	5.53	2.69	3.17	-160.825806	5.694719	-0.006185	14.352131
11	183.333328	Truck	5.53	2.69	3.17	-160.569336	5.69329	-0.005572	15.086699
12	200	Truck	5.53	2.69	3.17	-160.300385	5.691956	-0.004959	15.821267
13	216.666672	Truck	5.53	2.69	3.17	-160.036179	5.690798	-0.004382	16.512667
14	233.333328	Truck	5.53	2.69	3.17	-159.742981	5.689693	-0.003769	17.247234
15	250	Truck	5.53	2.69	3.17	-159.437286	5.688728	-0.003156	17.981802
16	266.666656	Truck	5.53	2.69	3.17	-159.138519	5.687958	-0.002579	18.673201

2. Eye-Tracking Data (participant_xx.csv)

This file contains the eye-tracking records collected while a participant watched the corresponding scenario video. It includes pupil size, fixations,

saccades, and related metrics.

Name	Description	Unit
rec_time	Local time (Beijing)	[-]
UTC	UTC timestamp	[ms]
Pupil X	Mean pupil-center X coordinate (left & right eyes)	[px]
Pupil Y	Mean pupil-center Y coordinate (left & right eyes)	[px]
Left Eye_Pupil X	Pupil-center X coordinate of the left-eye	[px]
Left Eye_Pupil Y	Pupil-center Y coordinate of the left-eye	[px]
Left Eye_Pupil Area	Pupil area of left eye	[px]
Left Eye_Pupil Height	Pupil height of left eye	[px]
Left Eye_Pupil Width	Pupil width of left eye	[px]
Left Eye_Fixations_Fixations	Fixation flag of left eye (0=no, 1=yes)	[-]
Left Eye_Fixations_Fixations Duration	Duration of each fixation of left eye	[s]
Left Eye_Saccades_Saccades	Saccade flag of left eye (0=no, 1=yes)	[-]
Left Eye_Saccades_Saccades	Duration of each saccade of left eye	[s]

Duration		
Left Eye_Saccades_Saccades Angle	Saccade angle of left eye	[°]
Right Eye_Pupil X	Pupil-center X coordinate of the right-eye	[px]
Right Eye_Pupil Y	Pupil-center Y coordinate of the right-eye	[px]
Right Eye_Pupil Area	Pupil area of right eye	[px]
Right Eye_Pupil Height	Pupil height of right eye	[px]
Right Eye_Pupil Width	Pupil width of right eye	[px]
Right Eye_Fixations_Fixations	Fixation flag of right eye (0=no, 1=yes)	[-]
Right Eye_Fixations_Fixations Duration	Duration of each fixation of right eye	[s]
Right Eye_Saccades_Saccades	Saccade flag of right eye (0=no, 1=yes)	[-]
Right Eye_Saccades_Saccades Duration	Duration of each saccade of right eye	[s]
Right	Saccade angle of right eye	[°]

Eye_Saccades_Saccades		
Angle		

Participant example:

rec_time	UTC	Pupil X	Pupil Y	Left Eye_Pupil X	Left Eye_Pupil Y	Left Eye_Pupil Area	Left Eye_Pupil Height	Left Eye_Pupil Width
02:05.3	1.71E+12	176.942	135.785	157.389	137.418	1056.162	38.711	34.756
02:05.3	1.71E+12	176.965	135.752	157.389	137.415	1055.742	38.69	34.761
02:05.3	1.71E+12	176.933	135.801	157.39	137.462	1049.633	38.596	34.644
02:05.3	1.71E+12	176.936	135.783	157.374	137.482	1047.786	38.375	34.782
02:05.3	1.71E+12	177.006	135.824	157.494	137.488	1047.857	38.534	34.641
02:05.3	1.71E+12	177.057	135.831	157.525	137.524	1042.65	38.311	34.669
02:05.4	1.71E+12	177.113	135.806	157.612	137.47	1042.313	38.424	34.556
02:05.4	1.71E+12	177.16	135.821	157.658	137.516	1029.479	38.065	34.452
02:05.4	1.71E+12	177.235	135.747	157.732	137.399	1026.948	38.166	34.277
02:05.4	1.71E+12	177.256	135.749	157.8	137.432	1028.257	38.078	34.4
02:05.4	1.71E+12	177.335	135.767	157.906	137.439	1021.069	37.968	34.259
02:05.4	1.71E+12	177.35	135.711	157.929	137.395	1014.503	37.692	34.287
02:05.5	1.71E+12	177.355	135.712	157.977	137.388	1011.524	37.719	34.162
02:05.5	1.71E+12	177.419	135.641	158.045	137.287	1009.693	37.54	34.263
02:05.5	1.71E+12	177.441	135.679	158.064	137.355	1005.957	37.55	34.127
02:05.5	1.71E+12	177.485	135.654	158.125	137.3	997.813	37.446	33.945
02:05.5	1.71E+12	177.729	135.727	158.23	137.331	994.854	37.38	33.904