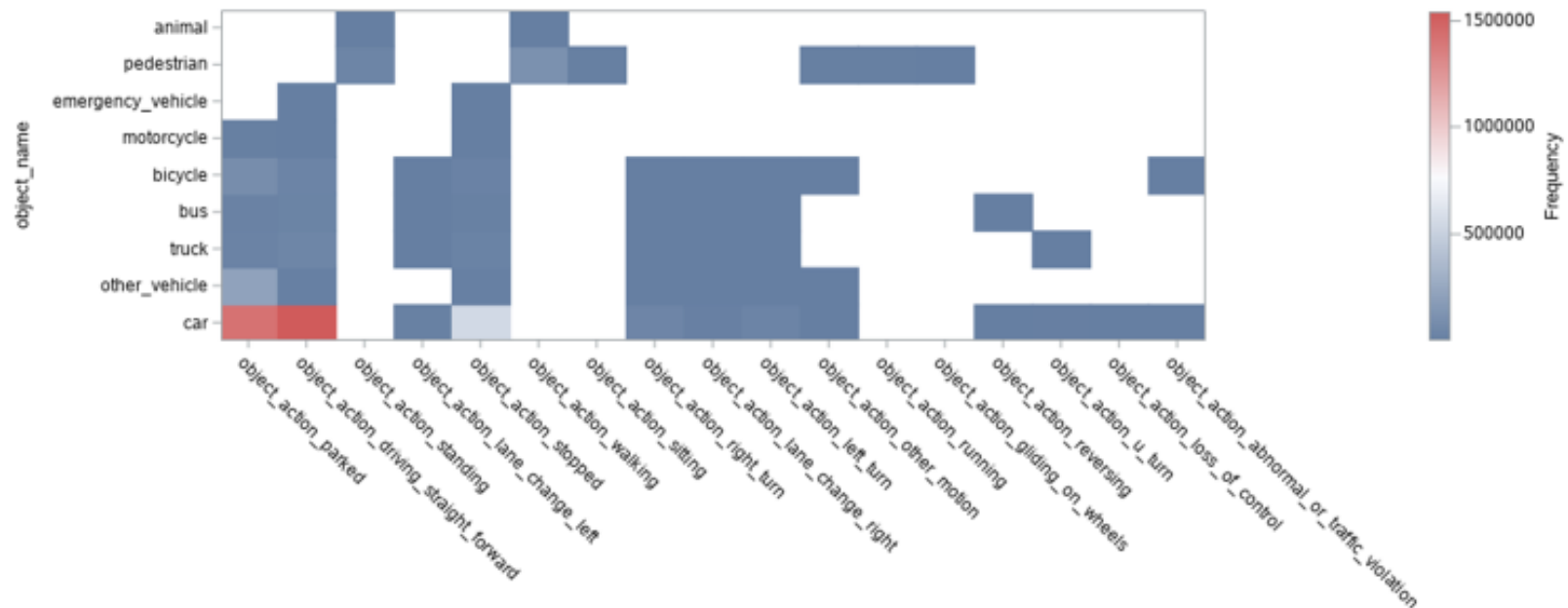# Figure 14: Attribute Influence on Object Classification

Question 2: Do available characteristics of an object strongly influence how they are classified?

Additional anedotial evidence for correlation between the attribute observed and the object's category.

Question 2: Do available characteristics of an object strongly influence how they are classified?

PROC LOGISTIC (glogit)

Response=category_name Parameters=nbr_annotations, attribute_name

Analysis of Maximum Likelihood Estimates						
Parameter	category_name	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	animal	1	0.8517	0.000919	859015.409	<.0001
Intercept	bicycle	1	2.5461	0.000049	2674502712	<.0001
Intercept	bus	1	-0.5732	0.000079	53230355.0	<.0001
Intercept	car	1	4.4403	0.000025	3.07998E10	<.0001
Intercept	emergency_vehicle	1	-3.1248	0.000508	37812624.6	<.0001
Intercept	motorcycle	1	-1.5334	0.000233	43197369.8	<.0001
Intercept	other_vehicle	1	0.4720	0.000034	194015818	<.0001
Intercept	pedestrian	1	13.6247	0.000106	1.66313E10	<.0001
nbr_annotations	animal	1	-0.0442	0.000021	4464805.13	<.0001
nbr_annotations	bicycle	1	-0.0278	1.001E-6	772227009	<.0001
nbr_annotations	bus	1	0.00421	9.248E-7	20708421.3	<.0001
nbr_annotations	car	1	-0.0144	3.795E-7	1433538680	<.0001
nbr_annotations	emergency_vehicle	1	-0.0461	0.000012	15165930.5	<.0001
nbr_annotations	motorcycle	1	-0.0321	5.205E-6	38132668.9	<.0001
nbr_annotations	other_vehicle	1	0.00494	5.056E-7	95655512.6	<.0001
nbr_annotations	pedestrian	1	-0.0127	1.621E-6	60977362.9	<.0001

nbr_annotations was significant, to varying degrees, for all categories

Question 2: Do available characteristics of an object strongly influence how they are classified?

PROC LOGISTIC (glogit)

Response=category_name Parameters=nbr_annotations, attribute_name

attribute_name	object_action_running	animal	1	-3.3124	0.00408	658265.186	<.0001
attribute_name	object_action_running	bicycle	1	-0.5932	295703	0.0000	1.0000
attribute_name	object_action_running	bus	1	-0.0466	477730	0.0000	1.0000
attribute_name	object_action_running	car	1	-0.0139	63898.4	0.0000	1.0000
attribute_name	object_action_running	emergency_vehicle	1	0.2308	4636351	0.0000	1.0000
attribute_name	object_action_running	motorcycle	1	0.4189	1491490	0.0000	1.0000
attribute_name	object_action_running	other_vehicle	1	0.5368	206746	0.0000	1.0000
attribute_name	object_action_running	pedestrian	1	28.5665	0.00408	48959107.7	<.0001
attribute_name	object_action_sitting	animal	1	-3.5734	0.00408	766101.690	<.0001
attribute_name	object_action_sitting	bicycle	1	-0.7574	303086	0.0000	1.0000
attribute_name	object_action_sitting	bus	1	-0.0217	498133	0.0000	1.0000
attribute_name	object_action_sitting	car	1	-0.0988	63858.3	0.0000	1.0000
attribute_name	object_action_sitting	emergency_vehicle	1	-0.0411	5136679	0.0000	1.0000
attribute_name	object_action_sitting	motorcycle	1	0.2292	1551646	0.0000	1.0000
attribute_name	object_action_sitting	other_vehicle	1	0.5660	216456	0.0000	1.0000
attribute_name	object_action_sitting	pedestrian	1	28.4918	0.00408	48703244.0	<.0001

Expected not significant assessments for attributes we normally ascribe to humans/animals (running and sitting)