feature	akaze	brisk	${ m cuda_sift}$	orb	sift	surf
ball	0.99/0.76 /0.16	0.99/0.53/0.15	0.95/0.64/0.16	0.96/0.4/0.12	0.95/0.51/0.11	0.83/0.65/ 0.19
basketball	0.05 /0.03/0.01	0.03/0.03/ 0.02	0.05/ 0.05 /0.01	0.03/0.02/0.01	0.03/0.03/0.01	0.03/0.02/0.02
bicycle	0.45/0.43/0.16	0.64/0.61/0.33	0.64/0.61/0.28	0.64/0.57/0.26	0.64/0.6/0.3	0.3/0.28/0.11
board	0.89/ 0.86 /0.18	0.95 /0.86/0.22	0.93/0.86/0.18	0.85/0.83/0.18	0.87/0.83/ 0.23	0.87/0.86/0.21
bolt	0.03/0.01/0.0	0.03/0.01/0.0	0.02/0.01/0.0	0.03/0.01/0.0	0.03/0.01/0.0	0.03/0.01/0.0
box	0.89/0.85/0.56	0.95/0.89/ 0.72	$\mathbf{0.96/0.92}/0.62$	0.91/0.87/0.69	0.87/0.82/0.55	0.83/0.8/0.57
car	0.09/0.09/0.09	0.64/0.63/ 0.32	0.64/0.63/0.51	0.64/0.63/ 0.59	0.64/0.63/0.2	0.52/0.35/0.12
car 2	0.74/0.73/0.52	0.86/0.85/0.58	0.65/0.65/0.52	0.87 /0.86/0.63	0.86/0.86/0.63	$0.87/\mathbf{0.87/0.65}$
carchase	0.14/0.11/0.04	0.4/0.36/0.14	0.4/ 0.37 /0.12	0.41/0.37/0.16	0.39/0.36/0.15	0.14/0.14/0.08
cup on	0.77/0.73/0.62	1.0/1.0/ 0.68	1.0/1.0/0.66	1.0/1.0/ 0.69	0.94/0.93/0.65	0.65/0.65/0.64
david	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0
diving	0.16/0.13/ 0.08	0.28 /0.13/0.07	0.16/0.13/0.07	0.19/0.13/0.07	0.18/ 0.14 /0.08	0.18/0.14/0.08
dog	1.0/1.0/ 0.85	1.0/1.0/0.84	1.0/1.0/0.83	1.0/1.0/ 0.87	0.96/0.95/0.81	1.0/0.99/0.72
drunk	0.03/0.03/0.01	0.04/0.04/0.02	0.11/0.03/0.01	0.2/0.1/ 0.02	0.11/0.1/ 0.06	0.08/0.08/0.04
fernando	0.17/0.12/ 0.02	0.19 /0.12/0.02	0.18/0.05/0.02	0.19/ 0.14 /0.02	0.17/0.08/0.02	0.14/0.05/0.02
fish1	0.04/0.01/ 0.0	0.05/0.01/0.0	0.05/ 0.02 /0.0	0.06 /0.01/0.0	0.06/0.01/0.0	0.05/0.01/0.0
fish2	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0	0.0/0.0/0.0
gym	1.0/0.99/0.25	1.0/0.89/0.14	0.58/0.51/0.1	1.0/0.69/0.15	0.96/0.77/0.13	0.29/0.26/0.09
gymnastics	0.43/0.4/0.35	0.45/0.42/0.35	0.44/0.42/ 0.36	0.45/0.42/0.36	0.55 /0.43/0.35	0.46/ 0.44 /0.35
hand1	0.25/0.17/0.04	0.19/0.08/0.03	0.17/0.1/0.03	0.22/0.12/0.03	0.19/0.09/0.04	0.1/0.09/0.04
hand2	0.14/0.05/ 0.04	0.2/0.08/0.04	0.11/0.06/0.04	0.23/0.09/ 0.04	0.16/0.06/0.04	0.11/0.06/0.04
jogging	0.85/0.73/0.23	0.64/0.61/0.22	0.67/0.51/0.16	0.75/0.51/0.12	0.25/0.24/0.09	0.51/0.43/0.07
juice	1.0/1.0/1.0	1.0/1.0/1.0	1.0/1.0/1.0	1.0/1.0/1.0	1.0/1.0/1.0	1.0/1.0/1.0
jumping	0.34/0.3/0.12	0.99/0.94/ 0.5	0.93/0.9/0.5	1.0/0.95 /0.39	0.49/0.41/0.17	0.11/0.11/0.1
lemming	0.06/0.06/0.02	0.6/0.58/0.3	0.49/0.48/0.3	0.66/0.62/0.32	0.55/0.52/0.27	0.13/0.12/0.08
liquor	0.86/0.85/0.72	0.94 / 0.93 /0.75	0.93/0.92/ 0.76	0.9/0.89/0.74	0.91/0.9/0.74	0.88/0.87/0.73
motocross	0.29/0.21/ 0.0	0.37/0.18/0.0	0.42/0.2/0.0	0.54/0.31/ 0.0	0.42/0.23/0.0	0.29/0.21/0.0
mountain-	0.58/0.56/0.24	1.0/1.0/ 0.29	1.0/1.0/0.35	1.0/1.0/0.35	1.0/1.0/ 0.44	1.0/1.0/0.31
person	1.0/0.95/0.59	0.94/0.82/0.45	0.98/0.91/0.48	0.92/0.76/0.41	0.98/0.93/0.47	0.85/0.81/0.51
person	0.86/0.8/0.7	0.79/0.75/0.65	0.84/0.79/0.7	0.76/0.68/0.51	0.83/0.73/0.59	0.78/0.73/0.61
person	1.0/0.95/0.83	1.0/0.95/0.82	1.0/0.95/0.82	1.0/0.95/0.82	1.0/0.95/0.81	1.0/0.95/0.82
partially polarbear occluded	0.42/0.39/0.21	0.44/0.41/0.17	0.0/0.0/0.0	0.45/0.44/0.23	0.44/0.38/0.12	0.0/0.0/0.0
singer	0.6/0.6/ 0.42	1.0 /0.83/0.33	1.0/ 0.94 /0.31	1.0/0.9/0.39	1.0/0.9/0.34	0.59/0.58/0.37
skating	0.09/0.09/0.02	0.7 /0.26/0.03	0.3/0.27/0.03	0.56/ 0.41/0.04	0.27/0.19/0.02	0.12/0.1/0.02
sphere	0.81/0.69/0.29	0.18/0.18/0.13	0.21/0.21/0.2	0.6/0.27/0.2	0.2/0.18/0.15	0.18/0.18/0.15
sunshade	0.8/0.38/0.11	0.92/0.43/0.16	0.94/0.4/0.2	0.88/0.41/0.15	0.96/0.63/0.22	0.49/0.19/0.05
surfing	0.21/0.21/0.14	1.0 /0.92/0.56	1.0/0.93/ 0.57	1.0/ 0.99 /0.46	1.0/0.97/0.27	0.04/0.04/0.04
sylvester	0.88/0.78/0.3	0.97/0.92/ 0.54	0.96/ 0.95 /0.52	1.0 /0.88/0.43	0.99/0.92/0.43	0.64/0.62/0.41
torus	0.33/0.12/0.05	0.26/0.11/0.04	0.18/0.06/0.05	0.32/0.06/0.05	0.25/0.06/0.05	0.09/0.06/0.05
track	0.69/0.69/0.59	0.79 /0.77/0.61	$0.79/\mathbf{0.79/0.74}$	0.75/0.74/0.54	0.79/0.79/0.69	0.29/0.29/0.25
trellis	0.05/0.05/0.03	0.19/0.16/0.05	0.11/0.08/0.02	0.16/0.12/0.04	0.17/0.15/0.04	0.2/0.2/0.14
tunnel	0.11/0.08/0.03	0.18/0.09/0.02	0.11/0.1/0.04	0.2/0.13/ 0.02	0.18/0.12/0.02	0.14/0.11/ 0.05
woman	0.11/0.1/0.07	0.19/0.11/0.06	$0.34/\mathbf{0.25/0.13}$	0.4 /0.23/0.06	0.15/0.12/0.07	0.11/0.09/0.04
overall	0.47/0.42/0.25	0.58/ 0.5 / 0.29	0.54/0.48/0.29	0.6 /0.5/0.28	0.54/0.48/0.26	0.39/0.36/0.23