

Pipeline	MegaDepth					ScanNet					Planar				IMC PhotoTourism						
	Filtered	Precision	Recall	AUC $^F_{\angle}$	AUC $^E_{\angle}$	Filtered	Precision	Recall	AUC $^F_{\angle}$	AUC $^E_{\angle}$	Filtered	Precision	Recall	AUC $^H_{\square}$	Filtered	Precision	Recall	AUC $^F_{\angle}$	AUC $^E_{\angle}$	AUC $^E_{\square}$	
SIFT	0.00	53.52	100.00	0.30	61.47	0.00	25.21	99.12	0.15	20.42	0.00	44.38	90.42	22.88	0.00	39.31	99.94	0.21	0.26	56.57	31.24
+ACNe	47.98	92.51	90.88	29.25	62.56	67.72	55.42	71.03	12.71	25.73	54.05	66.12	70.87	35.07	61.26	84.45	84.77	22.71	8.51	61.01	32.27
+ACNe+MAGSAC $_{\uparrow}$	53.64	96.39	83.39	54.34	62.83	79.85	60.96	47.76	19.31	25.59	72.80	74.25	44.48	44.42	66.56	89.79	75.67	45.17	23.08	60.79	32.10
+ACNe+MAGSAC $_{\downarrow}$	56.55	96.80	78.35	54.70	62.05	82.11	60.98	42.28	19.48	25.26	77.78	74.17	35.81	41.45	68.51	90.12	71.18	46.08	23.72	60.62	31.97
+AdaLAM	82.59	93.53	27.39	16.72	52.79	92.38	53.61	15.17	3.61	14.44	80.67	63.16	25.89	28.29	91.03	83.75	16.71	14.07	6.93	39.98	21.33
+AdaLAM+MAGSAC $_{\uparrow}$	83.65	92.40	26.08	47.13	51.16	93.93	46.42	12.23	10.56	13.69	84.95	60.73	20.41	33.11	91.52	73.33	15.77	30.39	17.66	39.30	20.81
+AdaLAM+MAGSAC $_{\downarrow}$	84.25	92.64	25.22	47.45	50.38	94.38	46.41	11.32	11.12	14.36	87.28	60.99	17.28	32.26	91.76	73.42	15.36	30.59	17.84	39.34	20.84
+CC	46.83	92.78	89.32	26.91	59.83	40.87	52.01	81.13	5.08	18.12	27.33	66.77	89.62	55.26	n/a	n/a	n/a	n/a	n/a	n/a	n/a
+CC+MAGSAC $_{\uparrow}$	54.12	96.28	80.70	52.23	59.36	81.21	59.26	41.56	12.68	18.59	69.29	73.36	49.55	47.48	n/a	n/a	n/a	n/a	n/a	n/a	n/a
+CC+MAGSAC $_{\downarrow}$	57.00	96.69	75.85	52.94	60.12	83.30	59.14	36.73	12.67	18.20	75.61	73.44	39.61	44.77	n/a	n/a	n/a	n/a	n/a	n/a	n/a
+CLNet	48.86	91.30	87.88	8.97	58.19	77.09	58.23	52.82	3.10	19.98	50.71	68.34	76.41	39.66	62.34	85.58	83.07	16.37	5.05	59.17	30.61
+CLNet+MAGSAC $_{\uparrow}$	55.64	96.13	79.14	43.23	56.75	83.33	61.54	39.84	10.99	19.37	69.31	74.19	49.16	47.42	67.41	90.32	73.95	39.88	20.18	58.80	30.24
+CLNet+MAGSAC $_{\downarrow}$	58.52	96.59	74.21	43.90	57.72	85.15	61.33	35.34	10.96	19.02	75.56	74.24	39.01	44.39	69.38	90.66	69.44	40.97	20.87	58.65	29.98
+ConvMatch	57.48	88.99	79.39	28.58	56.66	69.50	56.86	70.05	8.74	23.95	71.07	63.96	50.96	33.32	63.69	84.05	83.00	25.99	10.92	60.45	31.26
+ConvMatch+MAGSAC $_{\uparrow}$	62.89	92.85	71.39	46.47	57.05	80.86	61.77	46.67	17.24	23.85	84.62	70.11	30.68	33.72	69.50	90.27	72.00	43.36	22.40	59.95	30.98
+ConvMatch+MAGSAC $_{\downarrow}$	65.25	93.24	67.01	47.30	57.43	83.00	61.77	41.37	17.50	23.08	87.40	70.32	25.19	32.65	71.33	90.62	67.59	44.22	23.08	59.97	31.04
+DeMatch	52.87	91.38	83.69	26.05	57.69	70.09	55.89	67.66	6.82	22.22	64.33	65.16	57.55	39.07	63.59	83.19	81.96	24.13	9.82	59.60	30.69
+DeMatch+MAGSAC $_{\uparrow}$	58.86	95.94	75.29	44.95	58.01	81.27	60.89	45.11	14.82	22.93	79.19	72.74	36.09	40.02	69.61	89.57	70.95	41.51	21.19	58.94	30.26
+DeMatch+MAGSAC $_{\downarrow}$	61.43	96.37	70.74	45.97	58.03	83.38	60.81	39.80	15.04	22.25	82.65	73.06	30.00	38.64	71.45	89.91	66.56	42.58	21.94	58.85	30.16
+FC-GNN	50.51	95.34	85.52	26.90	63.37	79.49	64.92	48.23	11.06	24.54	54.32	72.08	71.04	46.44	65.09	89.13	74.92	17.95	8.84	60.00	33.13
+FC-GNN+MAGSAC $_{\uparrow}$	52.15	97.19	83.91	59.91	63.34	81.29	66.12	44.57	19.75	24.46	63.57	74.51	57.22	47.40	66.60	91.39	73.07	46.57	27.16	59.17	32.53
+FC-GNN+MAGSAC $_{\downarrow}$	52.91	97.31	82.60	60.24	63.69	82.11	66.19	42.62	19.82	24.55	68.94	74.69	48.61	45.04	67.16	91.52	71.84	47.12	27.58	59.09	32.26
+GMS	58.25	87.80	64.67	13.59	51.11	86.83	51.91	25.92	3.98	11.82	65.03	61.20	46.28	37.81	74.34	78.84	48.20	8.80	3.97	41.78	22.28
+GMS+MAGSAC $_{\uparrow}$	63.16	89.73	59.01	47.74	50.22	89.63	47.75	20.92	8.26	12.04	76.34	62.86	32.64	37.44	76.94	78.35	44.54	30.30	16.89	41.40	22.07
+GMS+MAGSAC $_{\downarrow}$	65.38	90.04	55.65	48.13	50.76	90.60	47.80	19.03	8.52	11.82	80.57	63.03	26.75	35.28	78.14	78.56	42.36	30.91	17.27	41.67	22.15
+MAGSAC $_{\uparrow}$	51.10	93.20	85.09	44.29	61.92	78.15	55.30	46.62	14.43	22.54	69.07	73.35	50.04	48.13	63.48	83.04	76.37	69.21	17.07	57.97	31.28
+MAGSAC $_{\downarrow}$	54.52	93.83	79.32	46.86	62.20	80.84	55.24	40.60	14.74	22.36	75.34	73.43	39.88	45.12	66.19	83.60	70.76	34.68	18.43	57.33	30.84
+MOP	44.18	89.57	92.50	10.20	62.05	70.50	52.42	61.97	3.30	23.12	50.12	66.08	76.18	49.83	61.15	81.01	79.03	8.49	3.61	57.20	31.22
+MOP+MAGSAC $_{\uparrow}$	52.29	95.02	83.43	55.92	62.46	81.18	58.70	43.71	17.73	23.12	69.68	71.61	47.93	47.22	66.65	85.80	71.36	42.46	23.86	56.83	30.87
+MOP+MAGSAC $_{\downarrow}$	55.34	95.45	78.37	57.54	62.40	83.37	58.72	38.59	17.52	23.08	76.07	72.01	37.87	44.79	68.66	86.12	67.24	43.23	24.52	56.79	30.91
+MOP+MiHo	39.79	85.29	95.84	3.85	64.82	59.34	45.24	74.68	0.94	24.80	46.99	63.77	78.60	41.52	55.98	76.16	84.92	3.62	1.76	59.96	33.18
+MOP+MiHo+MAGSAC $_{\uparrow}$	51.68	95.72	85.38	55.16	64.01	79.39	60.03	48.41	17.21	24.33	69.47	72.91	49.26	46.73	65.42	86.81	74.78	41.74	23.35	58.78	32.12
+MOP+MiHo+MAGSAC $_{\downarrow}$	54.83	96.24	80.13	56.56	63.77	81.78	60.02	42.67	18.18	24.33	75.64	73.28	39.36	44.71	67.63	87.20	70.19	42.83	24.07	58.75	31.77
+MOP+MiHo+NCC	39.79	84.49	95.05	3.58	64.47	59.34	45.04	75.17	0.91	25.93	46.99	65.10	81.47	42.17	55.98	75.17	83.85	3.38	1.71	59.86	33.17
+MOP+MiHo+NCC+MAGSAC $_{\uparrow}$	51.05	95.69	86.17	53.29	62.84	78.57	59.97	50.18	18.38	25.49	61.66	73.03	63.66	51.26	65.45	86.48	74.20	40.11	22.24	58.61	32.05
+MOP+MiHo+NCC+MAGSAC $_{\downarrow}$	53.11	96.11	82.65	54.66	63.87	80.50	60.02	45.40	18.30	24.30	66.99	73.47	55.16	49.33	67.01	86.83	70.91	41.20	22.97	57.94	31.33
+MOP+NCC	44.18	88.74	91.81	9.31	62.42	70.50	52.08	61.97	3.09	24.38	50.12	67.19	78.04	50.01	61.15	80.02	78.16	7.07	3.12	57.39	31.60
+MOP+NCC+MAGSAC $_{\uparrow}$	51.63	95.03	84.32	53.88	62.79	80.28	58.91	45.86	18.15	23.96	61.70	71.58	62.41	50.57	66.62	85.64	71.16	41.30	23.10	56.49	30.83
+MOP+NCC+MAGSAC $_{\downarrow}$	53.60	95.35	80.95	54.61	62.63	81.97	58.92	41.74	18.53	23.75	67.14	71.97	54.12	48.31	67.97	85.89	68.33	42.07	23.65	56.42	30.63
+MS ² DG-Net	65.84	81.23	58.09	0.90	52.16	68.15	43.36	57.34	0.20	18.70	70.84	58.69	44.68	11.17	68.76	68.35	59.78	0.52	0.29	48.69	24.83
+MS ² DG-Net+MAGSAC $_{\uparrow}$	72.88	91.21	52.22	41.99	51.17	85.11	56.79	35.62	11.87	18.94	85.42	71.66	27.93	35.57	77.23	80.26	51.84	31.06	16.00	47.85	24.37
+MS ² DG-Net+MAGSAC $_{\downarrow}$	74.47	91.62	49.24	42.79	50.69	86.68	56.73	31.66	11.66	18.18	87.76	71.92	23.30	34.49	78.55	80.58	48.82	32.36	16.78	47.46	24.04
+NCC	0.00	52.70	98.00	0.30	60.61	0.00	24.93	99.86	0.14	21.31	0.00	43.61	89.65	22.69	0.00	38.65	97.92	0.21	0.26	54.86	29.91
+NCC+MAGSAC $_{\uparrow}$	51.75	92.67	83.04	42.69	61.45	78.30	55.18	46.59	13.51	22.32	69.76	74.43	48.27	47.08	64.41	82.02	73.18	31.17	15.91	56.02	29.81
+NCC+MAGSAC $_{\downarrow}$	54.72	93.27	78.06	44.05	60.39	80.79	55.39	41.19	13.70	21.73	75.90	74.34	38.23	33.96	66.88	82.55	68.09	32.29	16.82	55.14	29.34
+NCMNet	48.30	91.24	88.72	10.54	58.90	76.16	58.45	54.53	5.16	20.86	50.91	68.41	76.14	39.95	62.07	86.37	84.67	19.40	6.65	60.22	31.31
+NCMNet+MAGSAC $_{\uparrow}$	55.23	96.03	79.74	44.46	58.49	82.52	61.43	41.22	12.34	20.87	69.57	74.32	49.00	47.42	67.16	90.86	75.22	40.47	20.29	59.68	30.72
+NCMNet+MAGSAC $_{\downarrow}$	58.12	96.44	74.78	45.30	58.48	84.40	61.38	36.74	12.42	19.90	75.66	74.98	39.33	45.10	69.16	91.20	70.61	41.48	20.89	59.39	30.44
+OANet	66.81	94.67	63.81	28.67	54.59	80.43	60.92	50.75	12.22	22.19	78.02	68.40	41.67	28.41	73.00	89.43	66.58	31.68	14.01	56.42	27.99
+OANet+MAGSAC $_{\uparrow}$	69.20	96.50	59.90	40.99	54.51	84.85	62.94	38.99	15.58	23.09	85.81	72.54	26.65	36.59	74.99	91.46	61.49	39.61	18.80	56.11	27.62
+OANet+MAGSAC $_{\downarrow}$	70.91	96.87	56.68																		