	MegaDepth								ScanNet								Planar						IMC Photo Tourism																									
Pipeline	Filtered	Precision	Recall	AUC <sup>F</sup> <sub>65</sub>	$AUC_{010}^F$	$AUC_{0:20}^F$	$\mathrm{AUC}_{\angle}^F$	AUC <sup>E</sup> <sub>05</sub>	AUC <sup>E</sup>	AUC <sup>E</sup>	20 AUC <sub>Z</sub>	Filteres	d Precision	m Recall	AUC <sup>F</sup> <sub>65</sub>	$AUC_{010}^F$	AUC <sup>F</sup> <sub>020</sub>	$\mathrm{AUC}_{\angle}^F$	AUC <sup>E</sup> <sub>05</sub>	$AUC_{010}^{E}$	3 AUCE	20 AUC <sub>Z</sub>	Filtero	d Precisio	on Recall	. AUC <sup>H</sup>	$_{5}$ AUC $_{010}^{H}$	$AUC_{015}^{H}$	$AUC_{\square}^{H}$	Filtered	i Precision	m Recall	AUC <sup>F</sup> <sub>65</sub>	$AUC_{010}^F$	$\mathrm{AUC}_{0:20}^F$	$\mathrm{AUC}^F_{\angle}$	$AUC_{05}^{E}$	$AUC_{010}^{E}$	${\rm AUC}^E_{020}$	AUC∠	$AUC_{0(5)}^F$	$AUC_{0(10}^F$	$_{0,1)}AUC_{0(20)}^{F}$	$_{,2)}$ AUC $_{\square}^{F}$	$AUC_{0(5,\frac{1}{2})}^{E}$	AUCE(10.)	$_{1,1)}$ AUC $_{0(20,2)}^{E}$	2) AUC□
$\begin{array}{l} {\rm LoFTR} \\ + {\rm MAGSAC}_{\uparrow} \\ + {\rm MAGSAC}_{\downarrow} \end{array}$	42.45	82.27 90.59 91.20	99.95 64.37 55.36	6.89 40.88 42.05	14.41 55.39 56.51	26.68 68.34 69.60	16.00 54.87 56.05	40.93 46.28 47.53	57.80 62.90 63.73	72.19 76.22 77.09	56.97 61.80 62.78	0.00 48.83 56.06	58.84 69.72 69.88		0.35 15.78 15.95	1.46 30.39 30.08	5.40 44.80 44.79			35.26 35.95 <b>36.33</b>	52.68 51.79 52.26	36.12 35.64 36.03	0.00 80.21 85.77	60.29 74.42 74.04		14.66 33.48 33.63	23.69 49.75 49.96	29.93 56.89 56.47		0.00 47.20 55.66		99.95 60.07 50.65	6.64 37.56 38.44	13.86 52.28 53.31	25.59 65.98 66.79		47.20 52.12 52.68		76.77 79.50 79.91	62.72 66.51 67.02	2.11 15.81 16.12	4.94 26.70 27.24	10.38 39.57 40.34	5.81 27.36 27.90	18.17 21.53 21.85	32.15 36.22 36.60		
$+MAGSAC_{\downarrow}$	62.94	90.28			24.48 35.44 36.12	39.93 50.04 50.93	25.89 35.99 36.64	26.06 30.36 31.47	43.52 48.73 49.38	60.28 65.18 65.83		50.04 66.65 71.02		55.50 38.81 33.71	7.18 7.34	6.61 16.80 17.25		7.93 18.14 18.41		26.78 27.46 26.84	42.82 43.00 42.66	27.50 27.84 27.40	52.17 86.80 90.19	64.56 73.54 73.73			37.51 42.63 42.21	44.78 50.92 50.73	39.06 33.83 32.53	42.03 65.51 70.70	85.12 90.07 90.46				39.82 53.08 53.49		34.59 39.44 39.48			51.54 56.05 56.05	4.36 8.52 8.67	9.30 16.01 16.20	17.26 26.56 26.90		11.68 13.61 13.73	22.78 25.55 25.84		23.90 26.62 26.85
+AdaLAM $+MAGSAC_{\uparrow}$ $+MAGSAC_{\downarrow}$	42.45 50.68	82.27 90.59 91.20	99.95 64.37 55.36	6.89 40.88 42.05	14.41 55.39 56.51	26.68 68.34 69.60	16.00 54.87 56.05	40.93 46.28 47.53	57.80 62.90 63.73	72.19 76.22 77.09		0.00 48.83 56.06	58.84 69.72 69.88	98.82 59.54 51.12	0.35 15.78 18.95	1.46 30.89 30.08	5.40 <b>44.80</b> 44.79	2.40 <b>30.86</b> 30.27	19.42 19.18 <b>19.51</b>	35.26 35.95 <b>36.88</b>	52.26	36.03	0.00 80.21 85.77	74.42 74.04		14.64 33.48 33.63		29.90 56.89 56.47	40.13 41.00 39.23	0.00 47.20 55.66	79.88 89.44 89.91	99.95 60.07 50.65	6.65 37.56 38.44	13.85 52.28 53.31	65.98	51.94		64.17 67.93 68.47	76.81 79.50 79.91	62.69 66.51 67.02	2.11 15.81 16.12	4.94 26.70 27.24	10.39 39.57 40.34	5.82 27.36 27.90	18.16 21.53 21.85	32.27 36.22 36.60	48.21 52.06 52.50	32.88 36.60 36.98
$+MAGSAC_{\uparrow}$ $+MAGSAC_{\downarrow}$	18.43 49.51 56.30	84.61 89.56 90.07	85.01 56.25 48.79	21.85 29.29 30.31	34.36 42.80 43.98	49.92 56.20 57.56	35.38 42.76 43.95	31.97 37.89 38.78	48.44 55.18 56.36	63.77 69.79 70.67	48.06 54.29 55.27	27.41 54.21 60.40	66.75 70.16 70.29	80.09 53.42 46.18	5.37 12.52 12.57	13.14 24.81 25.03	24.40 38.24 38.44	14.31 25.19 25.35	15.74 17.04 15.83	31.06 32.46 31.60	46.69 47.52 46.79		28.15 85.16 89.12	49.93 58.09 58.30	70.97 18.13 13.35	23.19 23.26 23.69	35.51 36.49 36.41	41.12 42.12 42.31	42.70 30.00 28.94	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a
+CLNet $+MAGSAC_{\uparrow}$ $+MAGSAC_{\downarrow}$	57.03	85.42 90.50 90.96	83.88 55.30 47.84	10.78 20.97 21.83	18.98 32.78 33.79	31.75 47.34 48.50	20.50 33.70 34.70	28.37 33.35 35.18	45.95 51.96 53.38	62.49 67.87 68.99	45.60 51.06 52.52	50.68 64.14 68.71	67.83 70.13 70.18	56.28 41.69 36.35	1.10 4.06 4.41	3.68 11.02 11.37	8.87 22.23 22.61	4.55 12.43 12.80	11.46 10.39 10.41	24.23 23.34 23.17	39.26 38.10 38.11	24.98 23.94 23.90	30.33 80.58 86.17	63.87 71.66 71.95	73.82 22.66 16.10	31.04 31.15 31.73	44.99 46.99 46.96	52.20 54.19 54.07	50.51 38.75 37.22	30.08 58.35 64.57	85.12 89.74 90.12	74.48 47.20 40.25	9.41 19.14 19.71	17.00 30.26 30.92	28.60 44.11 44.59	18.34 31.17 31.74	33.73 38.70 39.13	51.20 56.14 56.53	66.10 70.12 70.36	50.34 54.99 55.34	3.24 7.02 7.18	6.80 13.12 13.40	12.65 21.92 22.29	7.56 14.02 14.29	11.53 13.68 13.70	22.30 25.64 25.95	36.41 40.39 40.78	23.41 26.57 26.81
+ConvMatch +MAGSAC† +MAGSAC↓	75.11 82.85 85.19	86.01 87.69 88.03	26.71 19.15 16.58	8.84 10.60 10.23	17.75 19.84 19.97	31.25 33.56 33.45	19.28 21.33 21.22	14.34 15.17 15.89	27.96 29.09 30.56	44.61 46.07 48.04	28.97 30.11 31.50	77.09 83.61 <b>85.57</b>	66.71 66.57 66.68	29.16 21.02 18.39	1.83 2.79 3.23	6.24 7.99 8.74	14.58 16.93 17.98	7.55 9.24 9.98	6.83 6.57 7.24	17.14 16.79 17.79	30.65 29.89 31.23	18.21 17.75 18.75	73.82 93.07 94.86	63.75 70.99 71.24	27.60 8.30 5.92	15.55 15.70 16.40	31.95 31.97 31.97	40.81 40.54 40.45	28.98 24.13 23.68	74.21 83.19 85.76	85.78 87.56 87.87	28.97 19.75 16.77	10.07 11.95 12.18	20.76 22.81 22.98	35.69 37.26 37.29	22.17 24.01 24.15	20.64 22.70 22.97	36.45 39.17 39.58	52.96 55.82 56.00	36.68 39.23 39.51	3.15 3.98 4.03	7.47 8.65 8.64	14.79 16.30 16.46	8.47 9.64 9.71	6.38 7.14 7.16	13.79 15.17 15.26	25.05 26.97 27.23	15.07 16.43 16.55
+DeMatch $+$ MAGSAC $_{\uparrow}$ $+$ MAGSAC $_{\downarrow}$	62.46 74.70 78.01	89.46	39.81 28.00 24.38	10.69 13.32 13.98	21.39 24.80 24.87	35.54 40.37 39.73	22.54 26.16 26.19	18.23 20.67 21.30	33.17 36.94 37.99	50.23 54.36 55.37	33.88 37.33 38.22	65.80 75.20 78.30			1.67 3.23 3.40	5.42 9.08 9.61	13.90 19.89 20.48	7.00 10.74 11.16	9.25 8.23 7.77	20.67 20.10 19.90	34.86 35.07 34.52	21.59 21.13 20.73	69.06 90.93 93.20	63.78 71.76 71.96	32.65 10.59 7.86	18.24 18.96 19.43	34.04 37.04 37.07		31.80 28.14 27.44	63.83 76.79 80.21	85.42 88.86 89.18	39.46 26.54 22.68	10.81 14.78 15.04	22.02 26.88 27.16	37.60 42.19 42.45	23.48 27.95 28.22	23.59 25.68 25.72	40.36 43.37 43.56	57.12 60.29 60.70	40.36 43.11 43.33	3.49 4.84 5.00	7.93 10.31 10.56	15.44 18.88 19.13	8.96 11.34 11.57	7.52 8.25 7.94	15.97 17.23 16.93	28.04 29.91 30.02	17.18 18.46 18.29
+MAGSAC <sub>↓</sub>	20.82 29.79 33.53				65.35	77.10	40.76 64.15 64.44	50.85 82.42 50.83	67.41 68.64 67.84	80.35	66.34	35.61 49.78 54.26	68.20 71.66 71.83	73.02 59.17 53.93	4.45 15.29 15.73	10.30 29.69 29.85	19.65 44.22 44.05	11.47 29.74 29.87	18.59 18.41 17.89	35.11 35.43 34.55	50.64 51.01 50.24	34.78 34.95 34.22	31.26 56.14 64.91	73.37 77.19 77.70	79.09 64.16	34.18 39.38 39.33	47.76 52.28 52.73	53.75 57.98 58.72		29.50 36.10 39.17	93.02 95.19 95.46	89.67 83.69 80.06	25.88 46.82 47.28	61.62	78.70	60.87	88.00 57.95 88.00	72.64	83.09 83.10 82.96	71.29 71.27 71.20	11.84 22.10 22.84	34.40 34.85	29.81 47.85 48.12		25.06 25.06 25.00	41.44 41.81	87.48	41.54
+GMS +MAGSAC† +MAGSAC↓	50.45 57.35	88.25 88.73	85.76 55.21 47.63	23.23 37.01 37.85	35.66 50.71 51.75	50.12 63.75 64.68	36.34 50.49 51.43	37.15 43.19 43.11	53.43 59.21 59.77	67.46 72.34 72.71		39.20 58.82 64.34	66.48 69.20 69.32	67.45 47.59 41.22	4.19 13.37 12.81	10.66 25.58 25.11		11.87 25.89 25.47	15.88 15.94 16.45	31.21 31.00 31.75	46.21 45.95 46.61			71.65 72.11	73.13 20.96 15.13	30.17 32.61 33.06	44.51 48.83 49.08	51.04 55.31 55.25	49.71 39.43 38.13	62.74	89.90	82.53 50.42 42.69	20.20 33.96 34.66	32.61 48.50 49.14		33.21 48.30 48.91	42.75 48.21 48.78		72.22 75.94 76.20	58.08 62.77 63.16	7.25 14.10 14.38	13.92 24.21 24.56	23.40 36.46 36.97	14.86 24.92 25.31	16.66 19.53 19.98	29.52 33.37 33.75		30.16 33.84 34.25
	-	88.55 88.93	22.04 15.20 13.33	4.15 15.52 15.89	9.27 25.71 26.00	18.41 38.93 39.15	10.61 26.72 27.01	13.73 16.84 17.68	25.58 31.06 31.17	40.74 47.14 46.95	26.69 31.68 31.93	71.03 81.09 83.33			0.21 5.29 5.40	0.90 12.43 12.48	3.06 23.29 23.13	1.39 13.67 13.67	8.08 8.13 7.42	18.32 18.41 17.85	31.38 31.56 31.74	19.26 19.37 19.00	78.34 95.16 96.29	62.50 72.30 72.87		5.37 16.87 17.35	8.51 30.91 30.24		11.77 23.35 22.63	75.42 85.25 <b>87.30</b>		26.62 17.17 14.80	3.75 15.06 15.33	9.00 25.60 26.19	18.94 38.78 39.57	10.56 26.48 27.03	18.41 21.79 22.43	31.91 36.99 37.62	46.76 52.50 53.27	32.36 37.09 37.78	5.41 5.53	3.20 10.52 10.78	7.14 18.28 18.73	3.88 11.40 11.68	5.71 7.22 7.41	12.29 14.70 15.01	22.34 25.70 26.16	13.45 15.87 16.19
+NCMNet +MAGSAC† +MAGSAC↓	49.34 56.24	90.66 91.13	85.44 56.37 48.80	10.12 21.21 21.80	18.03 33.50 34.30	30.81 47.75 48.67	19.65 34.15 34.92	29.12 33.85 33.89	46.79 52.15 51.69	63.25 68.43 67.97	46.39 51.48 51.18	48.03 62.09 66.96	67.90 69.92 70.04	59.37 43.97 38.31	2.03 5.42 5.26	5.55 13.62 13.58	12.73 25.21 25.55	6.77 14.75 14.80	13.00 12.52 12.17	27.23 26.27 25.80	42.04 41.16 40.41	27.42 26.65 26.13	25.68 80.32 85.88	73.42 73.62	78.87 23.65 16.98	32.57 32.71 33.08	47.18 48.80 48.77	53.67 55.49 55.42	53.07 40.16 38.56	26.59 56.52 63.07	85.51 90.09 90.48	78.54 49.54 42.17	9.85 19.63 19.92	17.73 30.98 31.43	29.59 45.13 45.54	19.06 31.91 32.30	34.69 39.29 40.01	52.62 57.11 57.44	67.52 71.30 71.44	51.61 55.90 56.30	3.31 7.09 7.24	7.01 13.37 13.59	13.16 22.31 22.70	7.82 14.25 14.51	11.77 13.77 13.97	22.83 25.87 26.34	37.38 40.93 41.55	23.99 26.86 27.29
+MAGSAC <sub>↓</sub>	90.99	86.28 88.73 89.02	15.28 11.31 9.96	5.32 7.94 8.00	11.35 14.66 15.28	21.20 25.20 25.91	12.63 15.93 16.40	10.69 11.64 12.14	21.10 22.51 23.85	35.73 37.95 39.44	22.50 24.03 25.14	84.58 88.04 89.28	65.07 66.62 66.61	17.35 13.82 12.27	0.89 1.85 1.76	2.93 5.49 5.57	8.45 12.64 13.13	4.09 6.66 6.82	4.94 3.96 3.74	12.01 10.75 10.89	22.82 21.31 21.71	13.25 12.01 12.11	96.93 96.84 96.77	62.50 69.14 69.63	13.12 4.32 3.23	8.86 12.14 12.92	17.55 25.90 26.44	24.55 35.01 35.32	16.02 19.34 19.48	96.17 90.51 91.75	85.15 87.58 87.78	15.13 10.77 9.37	4.22 6.54 6.74	9.91 13.43 13.58	20.04 24.41 24.73	11.39 14.79 15.02	12.75 13.49 13.35	24.32 25.95 25.89	39.59 42.05 41.94	25.55 27.17 27.06	1.51 2.12 2.09	3.72 4.87 4.89	7.97 10.08 10.15	4.40 5.69 5.71	3.75 3.81 4.01	8.83 9.36 9.37	17.32 18.29 18.04	9.97 10.48 10.47
+MOP +MAGSAC† +MAGSAC↓	42.60 50.77	83.54 90.73 91.27	99.37 64.28 55.30	14.61 40.33 41.51	25.42 54.75 55.94	39.60 68.38 69.17	26.54 54.49 55.54	40.13 46.59 46.31	63.40 63.42	71.73 76.89 76.84		15.45 50.01 57.05	62.83 70.30 70.48	90.78 58.60 50.38	1.32 15.67 15.69	4.50 29.79 29.78	11.70 44.25 44.25	5.84 29.91 29.91	18.99 19.46 18.84	36.00 36.45 35.70	52.10 52.33 51.57	35.70 36.08 35.37	16.21 80.27 85.93	74.21 74.58		25.91 33.11 33.53	40.99 49.30 49.64	49.39 56.62 56.87	51.52 40.84 39.36	4.13 47.56 55.94	82.17 89.84 90.31	98.80 59.88 50.51	12.30 37.79 38.61	22.26 52.80 53.42	35.93 66.49 66.90	23.50 52.36 52.98	47.32 52.14 53.21	64.17 68.07 68.84	76.73 79.65 80.12	62.74 66.62 67.39	4.27 15.71 16.17	8.77 26.82 27.23	16.14 39.76 40.27	9.73 27.43 27.89	18.55 21.27 22.42	32.42 36.07 37.06	48.24 52.14 52.85	33.07 36.49 37.44
	42.52 50.73		64.30	11.02 40.54 41.72	20.63 54.91 56.40	34.16 68.08 69.39	21.94 54.51 55.84	40.88 46.78 47.92	63.67 64.23	71.72 77.12 77.31		7.96 49.08 56.29	60.72 69.96 70.13	95.09 59.54 51.06	0.86 15.36 15.66	2.80 29.29 29.80	7.79 44.09 44.69	3.82 29.58 30.05	19.05 18.76 18.55	35.58 35.57	53.47 51.61 51.74	35.94 35.32 35.29	11.30 80.03 85.74	61.59 74.32 74.60	89.40 24.18 17.16	20.88 33.35 33.71	33.50 49.51 49.55	41.08 56.85 56.24	46.21 40.97 39.17	1.93 47.34 55.77	80.87 89.62 90.10	99.48 60.02 50.60	8.95 37.79 38.63	17.44 52.49 53.46	30.26 66.13 66.99	18.88 52.13 53.03	47.46 52.44 53.19	64.34 68.26 68.80	76.96 79.79 80.11	62.92 66.83 67.37	2.96 15.78 16.19	6.53 26.85 27.40	12.82 39.85 40.42	7.44 27.49 28.00	18.49 21.61 22.36	32.52 36.35 36.97	48.41 52.36 52.78	33.14 36.77 37.37
+MAGSAC <sub>↓</sub>	33.47 38.49			45.42 46.57	17.83 59.62 <b>60.91</b>		19.27 58.94 <b>60.10</b>		68.85 67.94 68.29	81.38 80.85 80.93		7.96 58.01 63.35	56.43 69.39 69.62	90.94 49.18 42.95	0.66 13.78 13.38	2.43 27.29 27.19		3.42 27.30 27.23	18.86 18.38 18.66	35.37 35.30 35.22	50.67 50.93 50.57	34.97 34.87 34.82	11.30 48.91 57.61	69.33 82.14 82.94		23.34 40.92 41.04	35.23 88.17 55.66	42.30 62.02 61.97		1.93 38.98 44.00	78.70 94.53 95.08	85.02 78.97	6.55 40.34 41.21	14.32 54.12 55.10	67.62		58.06 57.59 57.19	72.59 72.43	83.17 83.15 83.19	71.70 71.11 70.93	1.95 18.52 19.06	4.73 29.21 29.82	10.33 41.14 41.85	5.67 29.62 30.24	24.83 24.76 24.76	40.65 40.28 39.90	57.34 56.66 56.31	40.94 40.56 40.33
+MAGSAC <sub>↓</sub>	34.01 38.98	81.59 95.39 95.95	91.16 85.37	45.33 46.39	59.63 60.76	35.74 71.75 <b>72.86</b>	58.90 60.00	50.03	67.68	80.42 80.31 80.56	66.09	15.45 59.36 64.53			1.05 13.33 13.29	3.97 26.53 26.23	40.02	5.30 26.72 26.51	17.91 18.07 17.56	34.59 34.32 33.92	50.19 50.04 49.19	33.56	-	70.56 81.91 82.23	93.25	40.23	53.92	<b>61.93</b> 60.32	61.93		79.62 94.59 95.12	84.09 78.18	8.70 40.47 <b>41.31</b>	54.16 55.03	66.76 67.47	19.04 53.80 54.60	57.27 57.04	72.43 72.28	83.74 83.12 83.06	71.59 70.94 70.79	2.61 19.02 19.20	6.04 29.60 <b>30.00</b>		6.96 30.01 <b>30.39</b>	25.00 24.98 25.15	40.83 40.25 40.13	57.38 56.59 56.32	41.07 40.61 40.53
+NCC +MAGSAC <sub>+</sub> +MAGSAC <sub>+</sub>			89.89 59.56 52.79	31.87	12.39 42.81 42.67	53.98	14.04 42.89 42.87	36.17 37.55 37.52	51.32 52.51 52.42	65.11 66.38 66.15		0.00 62.36 67.99	53.24 68.04 68.19		0.27 10.43 10.43	1.27 22.15 22.73		2.18 22.81 23.31	14.68 15.62 15.21	30.55 31.16 30.90			0.00 77.91 83.75	52.54 77.96 78.52	42.03	15.94 37.91 36.80	51.37	57.47	41.56 47.20 44.07	0.00 55.35 61.67	69.27 88.38 88.93	89.95 54.79 47.68	4.57 27.00 27.21	39.12	51.82	39.31	42.71		70.65	56.37 57.00 56.66	1.41 11.48 11.56	3.78 19.34 19.37	8.41 28.99 29.14		17.18 18.09 17.94		43.74	29.73 30.61 30.34