

| Pipeline                      | MegDepth     |          |              |              |                    |                    |                    |                    |                    |                     |                     |                      | ScanNet      |          |              |               |                    |                    |                    |                    |                    |                     |                     |                      |       |
|-------------------------------|--------------|----------|--------------|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|----------------------|--------------|----------|--------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|----------------------|-------|
|                               | Filtered     | +Runtime | Precision    | Recall       | AUC <sub>0.5</sub> | AUC <sub>0.6</sub> | AUC <sub>0.7</sub> | AUC <sub>0.8</sub> | AUC <sub>0.9</sub> | AUC <sub>0.95</sub> | AUC <sub>0.99</sub> | AUC <sub>0.999</sub> | Filtered     | +Runtime | Precision    | Recall        | AUC <sub>0.5</sub> | AUC <sub>0.6</sub> | AUC <sub>0.7</sub> | AUC <sub>0.8</sub> | AUC <sub>0.9</sub> | AUC <sub>0.95</sub> | AUC <sub>0.99</sub> | AUC <sub>0.999</sub> |       |
| SIFT+NSST+<br>+MAGSAC         | 5000         | 0.00     | 53.92        | <b>79.30</b> | 0.11               | 0.19               | 0.75               | 0.35               | <b>96.30</b>       | 63.50               | 76.97               | 62.26                | 0.00         | 0.00     | 24.83        | <b>89.19</b>  | 0.10               | 0.10               | 0.49               | 0.19               | 8.83               | 19.77               | 32.62               | 20.35                |       |
| +MAGSAC                       | 5000         | 6.08     | 50.73        | 79.31        | 0.11               | 0.19               | 0.75               | 0.35               | 96.30              | 63.50               | 76.97               | 62.26                | 0.00         | 6.08     | 24.83        | 89.19         | 0.10               | 0.10               | 0.49               | 0.19               | 8.83               | 19.77               | 32.62               | 20.35                |       |
| +ACNE                         | 47.62        | 3.45     | 92.54        | 90.05        | 12.73              | 28.08              | 47.64              | 29.48              | 66.58              | 65.19               | 78.99               | 63.89                | 67.86        | 5.88     | 55.02        | 70.85         | 0.15               | 10.94              | 24.98              | 13.02              | 12.49              | 10.30               | <b>60.82</b>        | <b>26.47</b>         |       |
| +MAGSAC                       | 53.26        | 4.04     | <b>96.38</b> | 83.41        | 98.93              | <b>42.32</b>       | <b>98.58</b>       | <b>54.01</b>       | <b>47.27</b>       | 65.28               | 79.02               | 63.89                | 80.20        | 19.74    | <b>60.44</b> | 47.25         | 7.96               | 10.80              | <b>31.28</b>       | <b>12.69</b>       | <b>12.65</b>       | <b>10.35</b>        | <b>26.47</b>        | <b>60.82</b>         |       |
| +MAGSAC                       | 53.26        | 4.17     | <b>96.38</b> | 83.41        | 98.93              | <b>42.32</b>       | <b>98.58</b>       | <b>54.01</b>       | <b>47.27</b>       | 65.28               | 79.02               | 63.89                | 80.20        | 19.74    | <b>60.44</b> | 47.25         | 7.96               | 10.80              | <b>31.28</b>       | <b>12.69</b>       | <b>12.65</b>       | <b>10.35</b>        | <b>26.47</b>        | <b>60.82</b>         |       |
| +AdaLM+<br>+MAGSAC            | <b>93.68</b> | 0.78     | <b>96.44</b> | 27.42        | 7.64               | 17.75              | 2.12               | 16.50              | 77.56              | 54.58               | 68.59               | 53.95                | <b>92.84</b> | 1.42     | 53.27        | 15.01         | 1.02               | 2.77               | 6.11               | 2.30               | 6.40               | 17.77               | 22.79               | 14.31                |       |
| +MAGSAC                       | <b>93.68</b> | 1.21     | 92.29        | 26.31        | <b>33.41</b>       | 47.09              | 60.63              | 47.65              | 36.06              | 53.19               | 66.99               | 52.08                | <b>94.09</b> | 2.29     | 46.05        | 12.11         | 4.69               | 10.27              | 17.84              | 10.93              | 5.40               | 12.31               | 21.38               | 13.03                |       |
| +MAGSAC                       | <b>94.92</b> | 1.19     | 92.53        | 25.25        | <b>33.39</b>       | 46.84              | 60.62              | 46.95              | 35.31              | 52.27               | 66.81               | 51.47                | <b>94.54</b> | 2.31     | 46.67        | 11.21         | 5.30               | 10.95              | 18.37              | 11.47              | 6.58               | 13.67               | 22.63               | 14.29                |       |
| +CC                           | 45.92        | 410.92   | 92.27        | 88.48        | 13.99              | 24.45              | <b>37.80</b>       | 25.42              | 44.34              | 62.09               | 75.45               | 60.63                | 40.75        | 306.18   | 53.34        | <b>80.88</b>  | 1.83               | 4.66               | 9.77               | 5.42               | 8.70               | 18.89               | 30.77               | 19.49                |       |
| +MAGSAC                       | 45.92        | 411.28   | 92.27        | 88.48        | 13.99              | 24.45              | <b>37.80</b>       | 25.42              | 44.34              | 62.09               | 75.45               | 60.63                | 40.75        | 306.18   | 53.34        | <b>80.88</b>  | 1.83               | 4.66               | 9.77               | 5.42               | 8.70               | 18.89               | 30.77               | 19.49                |       |
| +MAGSAC                       | 56.71        | 411.51   | <b>96.60</b> | 88.81        | 38.54              | 53.14              | <b>67.33</b>       | 53.00              | 43.35              | 61.61               | 76.02               | 60.19                | 83.72        | 337.91   | 58.57        | 75.36         | 5.39               | 11.74              | 20.08              | 12.61              | 8.73               | 18.86               | 31.05               | 19.45                |       |
| +CLNet                        | 48.44        | 10.78    | <b>91.36</b> | 78.60        | 3.09               | 6.91               | 16.55              | 8.95               | 40.07              | 60.35               | 75.36               | 58.89                | 77.43        | 13.68    | 57.74        | 52.39         | 0.47               | 2.16               | 6.81               | 3.14               | 9.04               | 19.84               | 32.02               | 20.32                |       |
| +MAGSAC                       | 55.27        | 11.39    | <b>96.13</b> | 79.18        | 27.94              | 42.25              | 58.04              | 42.74              | 38.46              | 58.02               | 73.88               | 56.79                | 83.73        | 14.92    | 60.98        | 39.28         | 4.32               | 10.17              | 14.92              | 11.47              | 8.40               | 19.07               | 31.89               | 19.80                |       |
| +MAGSAC                       | 58.21        | 11.39    | <b>96.13</b> | 79.18        | 27.94              | 42.25              | 58.04              | 42.74              | 38.46              | 58.02               | 73.88               | 56.79                | 83.73        | 14.92    | 60.98        | 39.28         | 4.32               | 10.17              | 14.92              | 11.47              | 8.40               | 19.07               | 31.89               | 19.80                |       |
| +ConvMatch                    | 56.99        | 16.30    | <b>96.10</b> | 79.03        | 28.09              | 43.04              | 59.29              | 43.14              | 39.29              | 61.14               | 75.99               | 58.89                | 80.18        | 17.17    | 60.98        | 39.28         | 4.32               | 10.17              | 14.92              | 11.47              | 8.40               | 19.07               | 31.89               | 19.80                |       |
| +MAGSAC                       | 62.34        | 25.76    | <b>93.59</b> | 71.70        | 32.80              | 47.32              | 61.06              | 47.06              | 42.08              | 59.64               | 73.54               | 58.42                | 81.19        | 88.71    | 61.07        | 66.3          | 7.74               | 17.39              | 29.31              | 18.11              | 11.50              | 24.33               | 38.16               | 24.06                |       |
| +MAGSAC                       | 62.34        | 25.92    | <b>93.57</b> | 67.25        | 32.89              | 47.40              | 61.27              | 47.09              | 41.63              | 59.77               | 73.91               | 58.44                | 83.33        | 91.66    | 61.00        | 41.06         | 7.78               | 17.46              | 29.39              | 18.21              | 11.07              | 23.95               | 37.89               | 24.31                |       |
| +DeMath                       | 62.50        | 40.42    | 91.49        | 83.88        | 14.78              | 25.29              | 38.92              | 26.32              | 49.53              | 68.73               | 76.16               | 59.27                | 70.29        | 128.40   | 55.68        | 67.41         | 1.78               | 5.04               | 13.31              | 6.71               | 10.04              | 22.49               | 36.63               | 20.35                |       |
| +MAGSAC                       | 62.50        | 41.17    | 91.49        | 83.88        | 14.78              | 25.29              | 38.92              | 26.32              | 49.53              | 68.73               | 76.16               | 59.27                | 70.29        | 128.40   | 55.68        | 67.41         | 1.78               | 5.04               | 13.31              | 6.71               | 10.04              | 22.49               | 36.63               | 20.35                |       |
| +FCG-Net                      | 50.00        | 8.28     | <b>95.41</b> | 85.43        | 15.72              | 21.94              | <b>38.37</b>       | 26.50              | 38.21              | 57.50               | 65.95               | 78.80                | 63.43        | 79.85    | 10.80        | <b>64.72</b>  | 47.84              | 4.19               | 10.42              | 15.18              | 11.26              | 12.01               | 24.37               | 38.30                | 24.06 |
| +MAGSAC                       | 51.75        | 8.60     | <b>97.09</b> | 83.75        | <b>47.35</b>       | <b>61.36</b>       | <b>73.84</b>       | <b>6.05</b>        | 47.50              | 65.45               | 78.49               | 63.81                | 81.73        | 11.86    | <b>64.92</b> | 43.67         | <b>9.65</b>        | <b>10.78</b>       | <b>31.44</b>       | <b>20.38</b>       | 12.24              | 24.66               | 38.38               | 25.09                |       |
| +MAGSAC                       | 52.51        | 8.70     | <b>97.09</b> | 83.75        | <b>47.35</b>       | <b>61.36</b>       | <b>73.84</b>       | <b>6.05</b>        | 47.50              | 65.45               | 78.49               | 63.81                | 81.73        | 11.86    | <b>64.92</b> | 43.67         | <b>9.65</b>        | <b>10.78</b>       | <b>31.44</b>       | <b>20.38</b>       | 12.24              | 24.66               | 38.38               | 25.09                |       |
| +GMS                          | 57.35        | 21.80    | <b>92.88</b> | 86.58        | 5.10               | 10.75              | 22.47              | 12.77              | 37.47              | 62.08               | 75.36               | 58.89                | 77.17        | 63.52    | 51.99        | 25.59         | 9.76               | 3.76               | 10.36              | 9.40               | 12.36              | 24.61               | 38.38               | 25.09                |       |
| +MAGSAC                       | 62.58        | 22.88    | <b>92.88</b> | 86.58        | 5.10               | 10.75              | 22.47              | 12.77              | 37.47              | 62.08               | 75.36               | 58.89                | 77.17        | 63.52    | 51.99        | 25.59         | 9.76               | 3.76               | 10.36              | 9.40               | 12.36              | 24.61               | 38.38               | 25.09                |       |
| +MSPG-Net                     | 65.89        | 14.14    | 81.33        | 56.35        | 0.08               | 0.47               | 2.32               | 0.96               | 36.29              | 53.00               | 67.96               | 52.63                | 68.01        | 38.75    | 43.13        | 57.12         | 0.00               | 0.17               | 0.83               | 0.33               | 8.65               | 18.88               | 30.45               | 19.33                |       |
| +MAGSAC                       | 72.85        | 14.89    | 91.36        | 51.49        | 29.38              | 42.00              | 56.55              | 42.98              | 34.94              | 51.88               | 66.45               | 51.08                | 85.27        | 63.40    | 66.38        | 35.26         | 5.24               | 11.75              | 20.09              | 12.56              | 8.82               | 19.00               | 31.25               | 19.69                |       |
| +MAGSAC                       | 72.85        | 14.89    | 91.36        | 51.49        | 29.38              | 42.00              | 56.55              | 42.98              | 34.94              | 51.88               | 66.45               | 51.08                | 85.27        | 63.40    | 66.38        | 35.26         | 5.24               | 11.75              | 20.09              | 12.56              | 8.82               | 19.00               | 31.25               | 19.69                |       |
| +NCC                          | 50.00        | 91.37    | 53.09        | <b>77.89</b> | 0.11               | 0.19               | 0.74               | 0.35               | <b>44.66</b>       | 68.89               | 75.50               | 60.08                | 0.00         | 17.74    | 24.54        | <b>103.20</b> | 0.00               | 0.17               | 0.49               | 0.19               | 10.18              | 21.77               | 32.98               | 21.44                |       |
| +MAGSAC                       | 51.39        | 97.74    | 92.48        | 82.89        | 30.83              | 42.77              | 54.19              | 42.60              | 44.69              | 62.31               | 77.48               | 61.79                | 78.72        | 29.12    | 54.97        | 46.19         | 5.77               | 10.37              | 23.07              | 13.93              | 10.64              | 22.42               | 35.60               | 22.88                |       |
| +MAGSAC                       | 51.44        | 98.58    | 93.13        | 77.91        | 41.92              | 42.06              | 55.41              | 43.80              | 43.18              | 62.07               | 76.78               | 60.68                | 81.20        | 27.14    | 55.11        | 49.09         | 5.87               | 13.29              | 23.54              | 14.24              | 10.38              | 21.91               | 34.47               | 22.25                |       |
| +NCNet                        | 48.02        | 32.20    | 91.08        | 88.31        | 4.08               | 8.75               | 19.48              | 10.57              | 41.35              | 61.17               | 76.33               | 59.61                | 76.89        | 96.93    | 59.09        | 54.06         | 1.42               | 3.98               | 10.40              | 9.59               | 21.01              | 24.65               | 33.56               | 21.51                |       |
| +MAGSAC                       | 50.95        | 32.79    | 91.08        | 88.31        | 4.08               | 8.75               | 19.48              | 10.57              | 41.35              | 61.17               | 76.33               | 59.61                | 76.89        | 96.93    | 59.09        | 54.06         | 1.42               | 3.98               | 10.40              | 9.59               | 21.01              | 24.65               | 33.56               | 21.51                |       |
| +MAGSAC                       | 57.35        | 32.29    | <b>96.28</b> | 76.28        | 30.86              | 44.88              | 58.48              | 45.07              | 40.25              | 64.47               | 74.90               | 58.21                | 84.77        | 98.48    | 60.88        | 36.13         | 4.78               | 11.15              | 21.21              | 12.38              | 8.85               | 19.43               | 32.38               | 22.02                |       |
| +oANet                        | 66.72        | 10.93    | <b>94.73</b> | 69.31        | 15.00              | 26.42              | 40.02              | 27.15              | 37.07              | 56.36               | 72.20               | 55.18                | 80.83        | 31.58    | 62.42        | 50.20         | 3.33               | 9.56               | 20.08              | 10.98              | 10.49              | 22.24               | 35.72               | 22.82                |       |
| +MAGSAC                       | 69.12        | 11.45    | <b>96.03</b> | 69.31        | 25.78              | 42.03              | 56.30              | 37.07              | 35.40              | 55.32               | 72.35               | 54.42                | 85.12        | 33.10    | 62.40        | 38.62         | 5.86               | 14.72              | 26.58              | 15.72              | 11.86              | 25.09               | 37.11               | 24.62                |       |
| +MAGSAC                       | 70.83        | 11.63    | <b>96.13</b> | 66.13        | 26.19              | 42.89              | 56.42              | 37.07              | 35.40              | 55.32               | 72.35               | 54.42                | 85.12        | 33.10    | 62.40        | 38.62         | 5.86               | 14.72              | 26.58              | 15.72              | 11.86              | 25.09               | 37.11               | 24.62                |       |
| +MOP <sub>0.5</sub> +MiHo     | 50.00        | 162.9    | 86.94        | <b>90.88</b> | 1.60               | 4.22               | 10.55              | 5.46               | <b>50.22</b>       | <b>67.35</b>        | <b>70.88</b>        | <b>65.61</b>         | 62.61        | 432.25   | 56.40        | 70.76         | 0.15               | 0.67               | 3.04               | 1.29               | 11.77              | 24.67               | 38.26               | 24.06                |       |
| +MAGSAC                       | 51.61        | 165.93   | <b>90.88</b> | 84.33        | 42.56              | 55.94              | 68.78              | 55.76              | 40.58              | 61.13               | 78.28               | 64.68                | 81.23        | 439.69   | 59.20        | 46.63         | 8.51               | 17.34              | 28.11              | 17.99              | 11.77              | 28.85               | 37.07               | 24.23                |       |
| +MAGSAC                       | 54.72        | 166.94   | <b>90.88</b> | 79.48        | 44.04              | 57.81              | 70.44              | 57.48              | 41.51              | 65.78               | 78.36               | 64.00                | 82.56        | 445.69   | 59.21        | 49.55         | 8.81               | 16.09              | 28.79              | 18.56              | 12.18              | 34.75               | 37.42               | 24.65                |       |
| +MOP <sub>0.5</sub> +MiHo+NCC | 50.00        | 238.78   | 85.87        | <b>90.88</b> | 1.43               | 4.02               | 10.69              | 5.18               | 47.96              | 64.20               | 77.69               | 63.05                | 62.61        | 548.54   | 57.26        | 71.06         | 0.22               | 0.69               | 3.19               | 1.15               | 11.66              | 24.64               | 38.21               | 24.36                |       |
| +MAGSAC                       | 51.04        | 242.9    | 84.84        | 84.74        | 41.65              | 55.53              | 68.85              | 54.82              | 47.40              | 65.00               | 78.42               | 63.70                | 81.58        | 459.47   | 59.20        | 46.63         | 8.51               | 17.34              | 28.11              | 17.99              | 11.77              | 28.85               | 37.07               | 24.23                |       |
| +MAGSAC                       | 53.07        | 244.36   | <b>97.37</b> | 81.34        | 41.65              | 55.53              | 68.85              | 55.08              | 47.21              | 65.00               | 78.42               | 63.70                | 81.58        | 459.47   | 59.20        | 46.63         | 8.51               | 17.34              | 28.11              | 17.99              | 11.77              | 28.85               | 37.07               | 24.23                |       |
| +MOP <sub>0.5</sub> +MiHo+NCC | 50.00        | 271.38   | 85.97        | <b>96.36</b> | 1.60               | 4.10               | 9.86               | 5.19               | 48.18              | 66.10               | 78.90               | 64.40                | 61.10        | 700.57   | 58.38        | 72.75         | 0.15               | 0.50               | 2.57               | 1.06               | 11.83              | 26.35               | 38.81               | 25.31                |       |
| +MAGSAC                       | 51.49        | 270.09   | <b>96.60</b> | 84.83        | 42.84              | 56.67              | 68.94              | 56.15              | 48.99              | 66.18               | 78.79               | 64.04                | 79.98        | 70.75    | 59.21        | 47.36         | 7.88               | 16.74              | 27.07              | 14.45              | 12.20              | 25.11               | 36.50               | 24.07                |       |
| +MAGSAC                       | 54.46        | 275.19   | 91.39        | 79.28        | 44.03              | 57.98              | 70.44              | 57.48              | 41.51              | 65.78               | 78.36               | 64.00                | 82.56        | 445.69   | 59.21        | 49.55         | 8.81               | 16.09              | 28.79              | 18.56              | 12.18              | 34.75               | 37.42               | 24.65                |       |
| +MOP <sub>0.5</sub> +MiHo+NCC | 50.00        | 346.78   | 85.09        | <b>90.49</b> | 1.47               | 3.89               | 9.85               | 4.91               | 48.62              | 67.13               | 76.53               | 64.06                | 61.10        | 806.53   | 58.43        | 73.           |                    |                    |                    |                    |                    |                     |                     |                      |       |