

MultisourceImageMatcher_OFMG1StF Executable

MultisourceImageMatcher_OFMH2StF Executable

1. Prerequisites for Deployment

Verify that version 9.10 (R2021a) of the MATLAB (or MATLAB Runtime) is installed.

If not, download and install the Windows version of the MATLAB (or MATLAB Runtime) for R2021a from the following link on the MathWorks website:

<https://www.mathworks.com/products/compiler/mcr/index.html>

For more information about the MATLAB Runtime and the MATLAB Runtime installer, see "Distribute Applications" in the MATLAB Compiler documentation in the MathWorks Documentation Center.

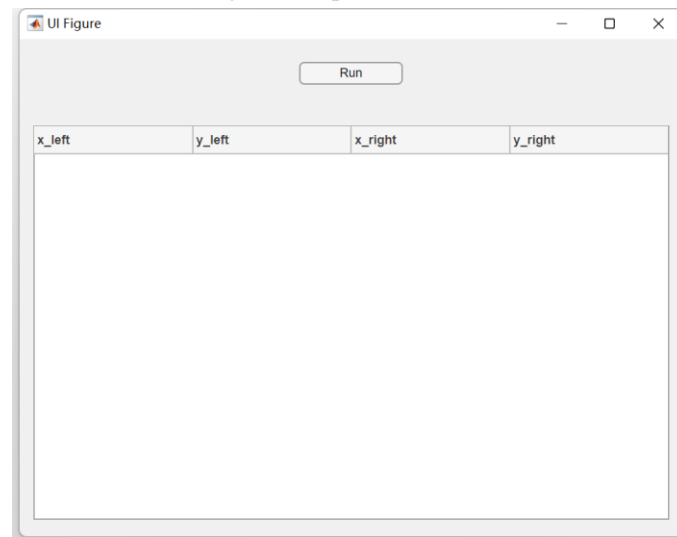
2. Usage of the implementation

Two implementations of the OFM algorithm are provided.

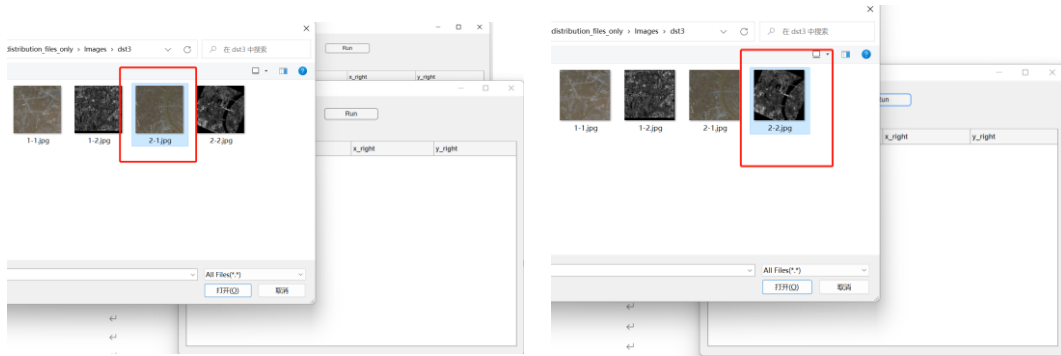
MultisourceImageMatcher_OFMG1StF.exe and MultisourceImageMatcher_OFMH2StF.exe

Note that the scale invariance part is not included.

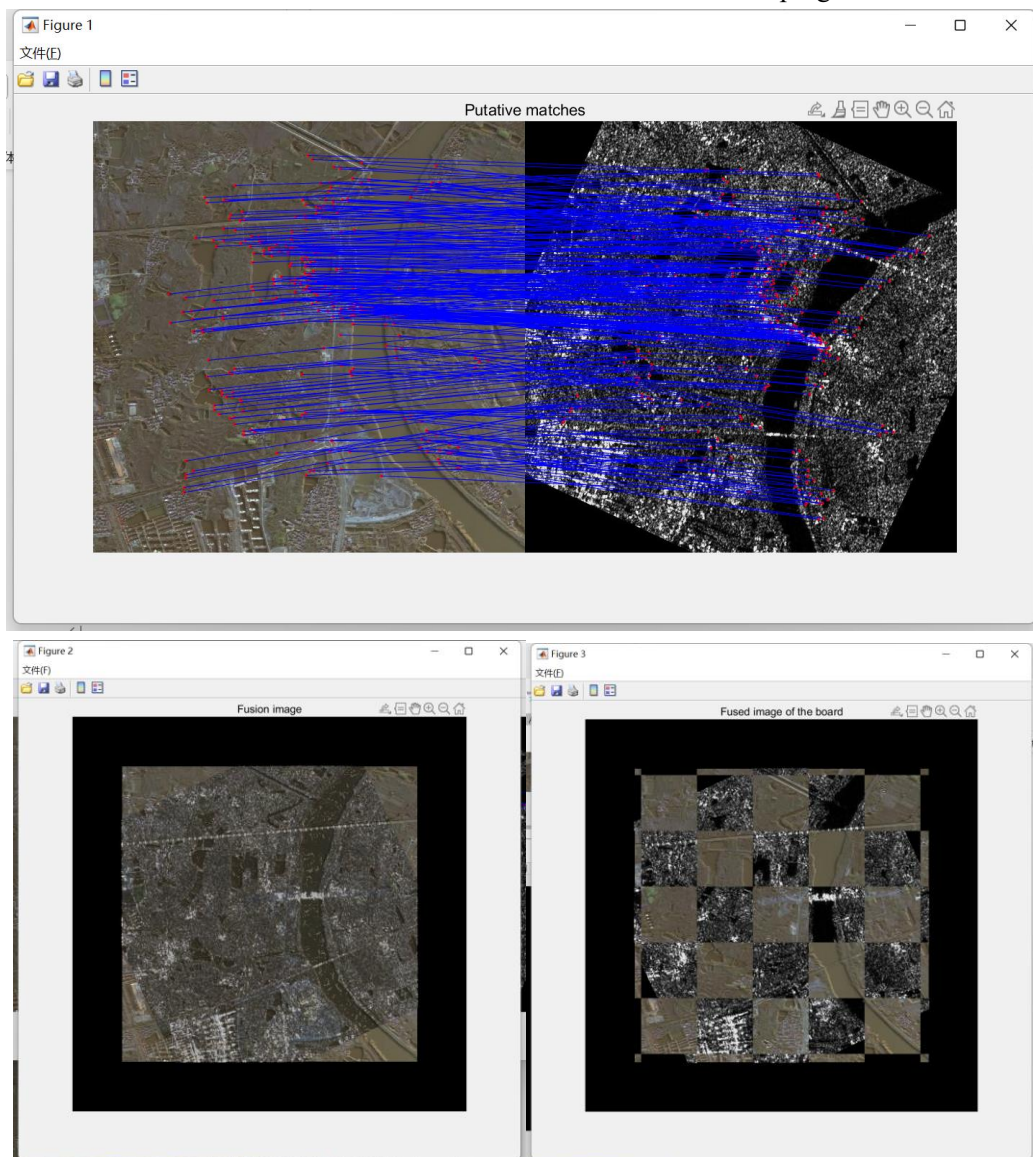
Double-click the .exe file to run the program. Then the following user interface will appear. Click the "Run" button to select the two images to be processed.



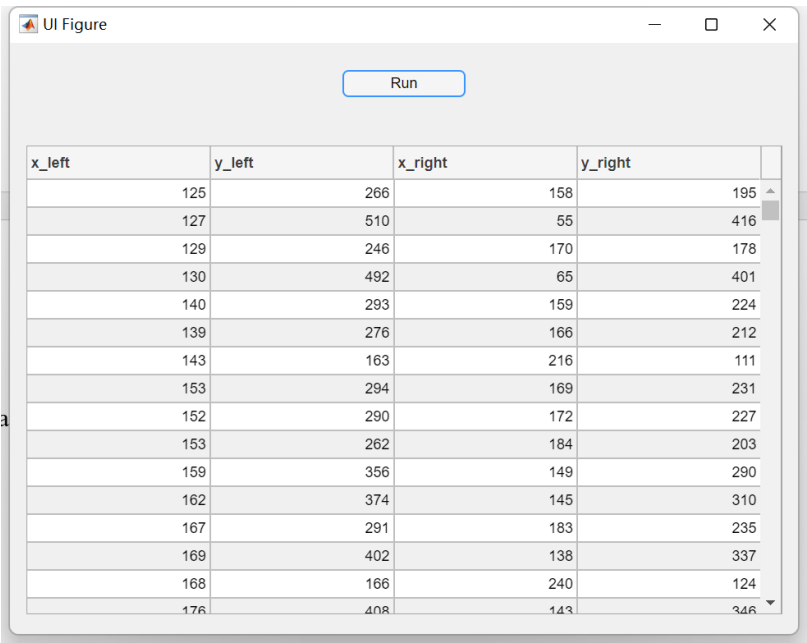
Typically, the first image is used as the reference image (left image) and the second image is used as the sensed image (right image).



Then wait for the results to appear. Usually, the first time you run the program is slower due to the need to hoist the MATLAB runtime. From the second time onwards the program will work faster.



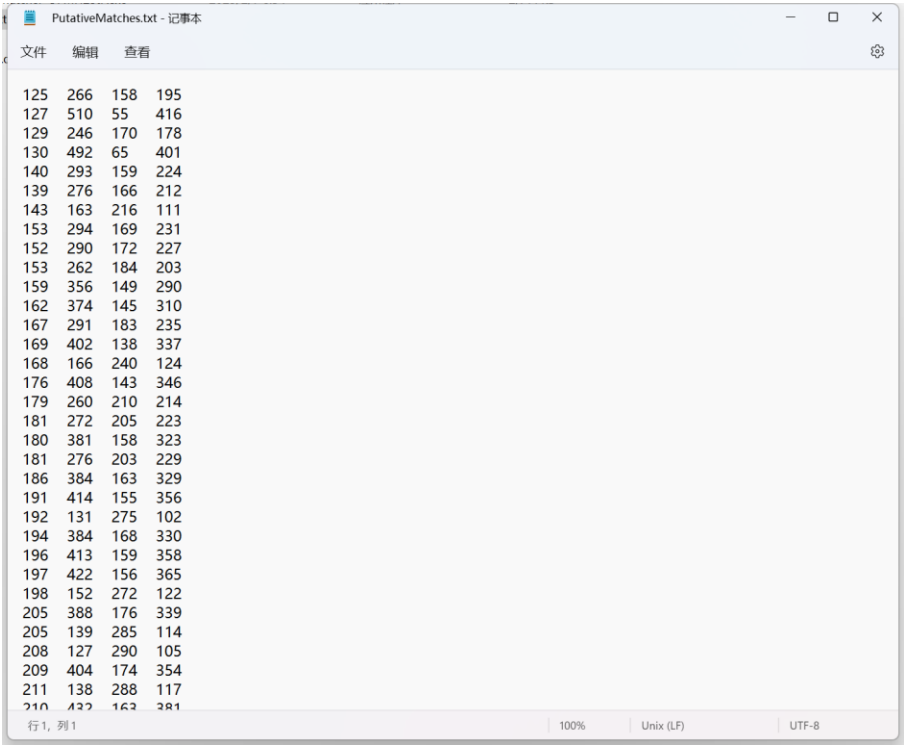
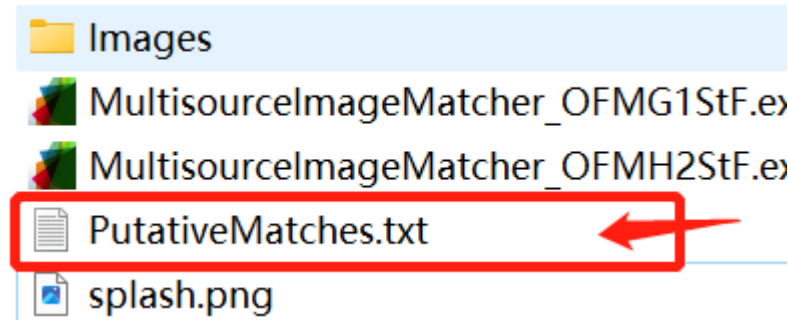
The coordinates of the matching point pairs will be displayed in the user interface.



The UI Figure window displays a table with four columns: x_left, y_left, x_right, and y_right. The table contains 20 rows of matching point coordinates. A 'Run' button is located above the table.

x_left	y_left	x_right	y_right
125	266	158	195
127	510	55	416
129	246	170	178
130	492	65	401
140	293	159	224
139	276	166	212
143	163	216	111
153	294	169	231
152	290	172	227
153	262	184	203
159	356	149	290
162	374	145	310
167	291	183	235
169	402	138	337
168	166	240	124
176	408	143	346

The results will also be stored here:



The PutativeMatches.txt file contains a list of matching point coordinates, one per line, separated by spaces. The file is displayed in a Notepad window.

```
125 266 158 195
127 510 55 416
129 246 170 178
130 492 65 401
140 293 159 224
139 276 166 212
143 163 216 111
153 294 169 231
152 290 172 227
153 262 184 203
159 356 149 290
162 374 145 310
167 291 183 235
169 402 138 337
168 166 240 124
176 408 143 346
179 260 210 214
181 272 205 223
180 381 158 323
181 276 203 229
186 384 163 329
191 414 155 356
192 131 275 102
194 384 168 330
196 413 159 358
197 422 156 365
198 152 272 122
205 388 176 339
205 139 285 114
208 127 290 105
209 404 174 354
211 138 288 117
210 422 162 381
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