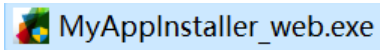
Generic Multimodal Image Matcher GLS-MIFT implementation

1. Prerequisites for its implementation

(1) version 9.10 (R2021a) of the MATLAB is installed.

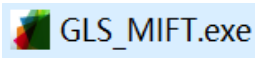
(2) or version 9.10 of the MATLAB Runtime is installed.

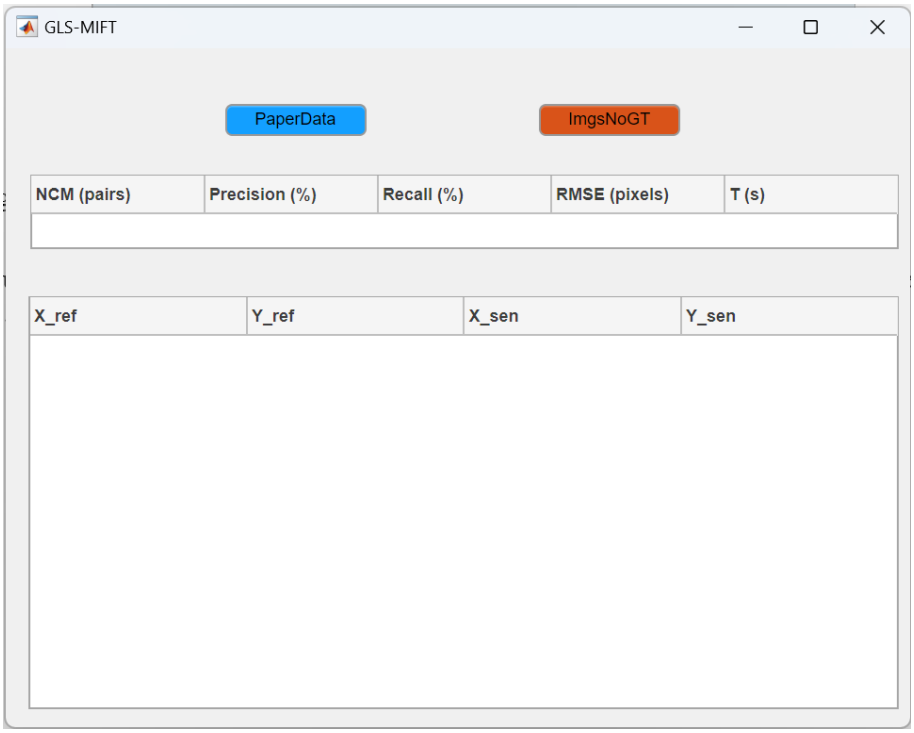
(3) or use the “MyAppInstaller_web.exe” we provide to install the runtime environment.



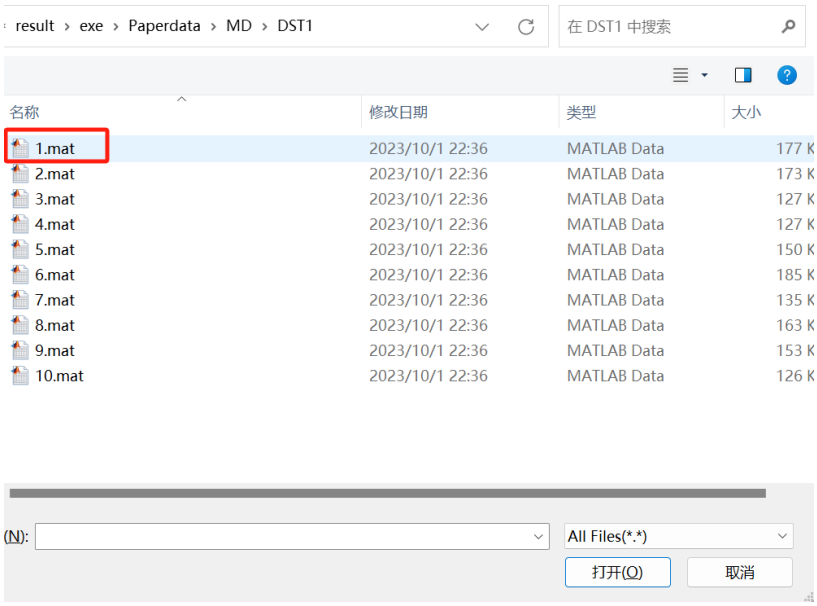
2. Usage of the implementation

(1) Double-click the GLS_MIFT.exe to run the program. Then the following user interface will appear.

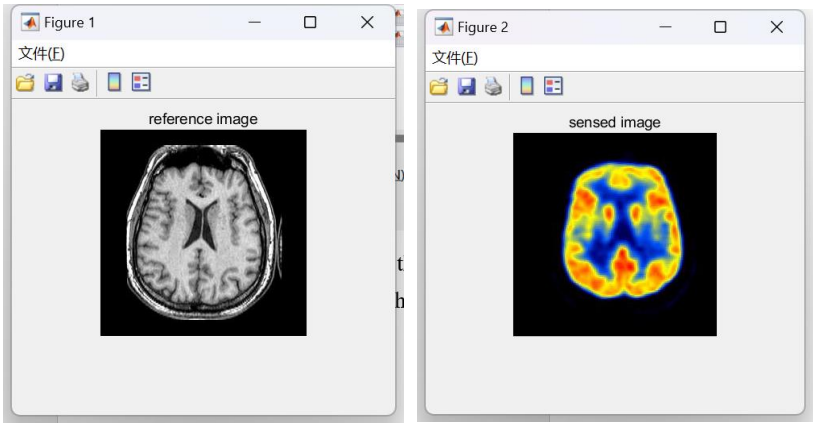


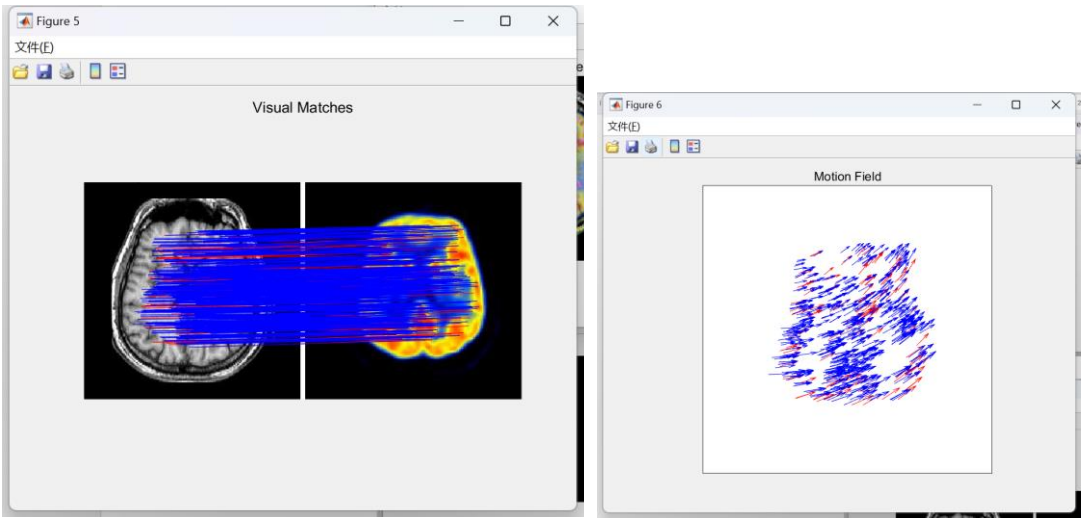


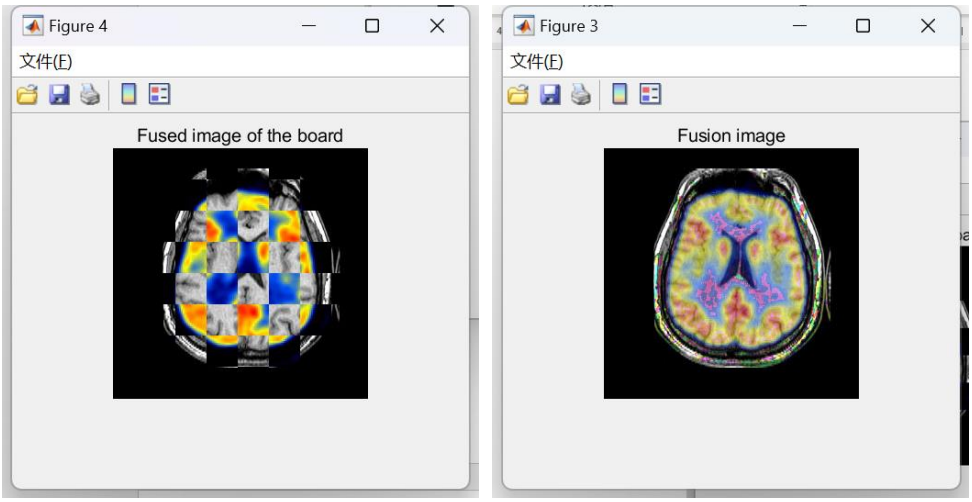
(2) We provide two buttons to run the implementation, "PaperData" will import the data (.mat) with ground truth provided in this paper and "ImgsNoGT" will import any two images. Let's take the "PaperData" button as an example.



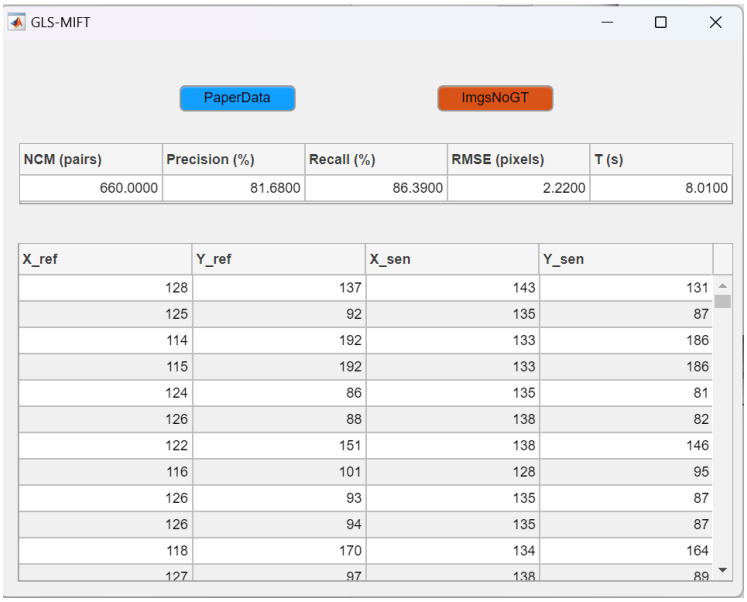
Then wait for the results to appear. Usually, the first time you run the program is slower due to the need to hoist the MATLAB runtime. From the second time onwards the program will work faster.







(3) The quantitative evaluation results and coordinates of the matching point pairs will be displayed in the user interface.



NCM (pairs)	Precision (%)	Recall (%)	RMSE (pixels)	T (s)
660.0000	81.6800	86.3900	2.2200	8.0100

X_ref	Y_ref	X_sen	Y_sen
128	137	143	131
125	92	135	87
114	192	133	186
115	192	133	186
124	86	135	81
126	88	138	82
122	151	138	146
116	101	128	95
126	93	135	87
126	94	135	87
118	170	134	164
127	97	138	89

The coordinates will also be stored here: