

Home x Untitled1 - Jupyter Notebook x Fingerprint Feature Extract x Assignment No 2 x Document 7.docx - Micros x + -

localhost:8888/notebooks/Untitled1.ipynb?kernel\_name=python3#

jupyter Untitled1 Last Checkpoint: an hour ago (autosaved) Logout

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
7         else:
8             print(f"No near-duplicates found in {input_dir} (threshold {threshold:.2%})")
9         except OSError:
10            print(f"Couldn't open input directory {input_dir}")
11    ved all files to (2022-07-04): Use readmpimg.imread instead.
12    Image.ANTIALIAS)

Found 297 near-duplicate images in C:\Users\mayha\Desktop\mmd\data (threshold 70.00%)
79.50% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\536_F_Left_index_finger.BMP
77.50% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\481_F_Right_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\514_F_Left_index_finger.BMP
76.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\15_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP
76.50% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\209_F_Left_thumb_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\399_M_Right_index_finger.BMP
76.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\128_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\15_F_Right_little_finger.BMP
75.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\157_M_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\284_M_Right_ring_finger.BMP
75.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\399_M_Right_index_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\428_M_Right_little_finger.BMP
75.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\15_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\481_F_Right_ring_finger.BMP
76.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\130_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\135_F_Left_ring_finger.BMP

In [116]: 1 if __name__ == "__main__":
2          main(sys.argv)
```

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Home x Untitled1 - Jupyter Notebook x Fingerprint Feature Extract x Assignment No 2 x Document 7.docx - Micros x + -

localhost:8888/notebooks/Untitled1.ipynb?kernel\_name=python3#

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

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12    Image.ANTIALIAS)

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75.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\514_F_Left_index_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\517_M_Left_index_finger.BMP
75.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\135_F_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\345_M_Left_ring_finger.BMP
75.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\15_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\277_M_Left_ring_finger.BMP
75.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\107_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\399_M_Right_index_finger.BMP
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74.50% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\481_F_Right_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\536_F_Left_index_finger.BMP
74.50% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\514_F_Left_index_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP
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74.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\107_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\130_M_Left_little_finger.BMP

In [116]: 1 if __name__ == "__main__":
2          main(sys.argv)
```

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localhost:8888/notebooks/Untitled1.ipynb?kernel\_name=python3#

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
7         print(f"Very similar files: file 1: {f1} - file 2: {f2}")
8     else:
9         print(f"No near-duplicates found in {input_dir} (threshold: {threshold:.2%})")
10    except OSError:
11        print(f"Couldn't open input directory {input_dir}")
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13    d\data\15_F_Right_little_finger.BMP
14    74.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\481_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP
15    74.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\107_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\345_M_Left_ring_finger.BMP
16    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\277_M_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP
17    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\428_M_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\517_M_Left_index_finger.BMP
18    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\15_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\238_M_Right_little_finger.BMP
19    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\277_M_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\536_F_Left_index_finger.BMP
20    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\277_M_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\401_F_Right_ring_finger.BMP
21    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\461_F_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP
22    73.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\135_F_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\284_M_Right_ring_finger.BMP
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```
7
8     else:
9         print(f"No near-duplicates found in {input_dir} (threshold {threshold:.2%})")
10    except OSError:
11        print(f"Couldn't open input directory {input_dir}")
12
13    \data\527_M_Left_middle_finger.BMP
14    72.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\176_M_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\345_M_Left_ring_finger.BMP
15    72.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\141_F_Right_middle_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\345_M_Left_ring_finger.BMP
16    72.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\157_M_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\481_F_Right_little_finger.BMP
17    72.00% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\15_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\399_M_Right_index_finger.BMP
18    71.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\284_M_Right_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\428_M_Right_little_finger.BMP
19    71.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\156_F_Left_middle_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\515_M_Right_little_finger.BMP
20    71.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\580_M_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\86_M_Right_little_finger.BMP
21    71.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\238_M_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\277_M_Left_ring_finger.BMP
22    71.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\399_M_Right_index_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\544_M_Right_little_finger.BMP
23    71.75% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\204_F_Left_middle_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\
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In [116]:

```
1 if __name__ == "__main__":
2     main(sys.argv)
```

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Home x Untitled1 - Jupyter Notebook x Fingerprint Feature Extract: x Assignment No 2 x Document 7.docx - Micros: x +

localhost:8888/notebooks/Untitled1.ipynb?kernel\_name=python3#

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File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```
7
8     else:
9         print(f"No near-duplicates found in {input_dir} (threshold {threshold:.2%})")
10    except OSError:
11        print(f"Couldn't open input directory {input_dir}")
12
13    \data\527_M_Left_middle_finger.BMP
14    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\135_F_Left_ring_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\580_M_Right_little_finger.BMP
15    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\399_M_Right_index_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\536_F_Left_index_finger.BMP
16    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\145_M_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\314_M_Left_thumb_finger.BMP
17    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\204_F_Left_middle_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\536_F_Left_index_finger.BMP
18    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\141_F_Right_middle_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\515_M_Right_little_finger.BMP
19    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\107_M_Left_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\544_M_Right_little_finger.BMP
20    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\209_F_Left_thumb_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\527_M_Left_little_finger.BMP
21    70.25% similarity: file 1: C:\Users\mayha\Desktop\mmd\data\481_F_Right_little_finger.BMP - file 2: C:\Users\mayha\Desktop\mmd\data\500_M_Right_little_finger.BMP
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In [116]:

```
1 if __name__ == "__main__":
2     main(sys.argv)
```

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