**CV ASSIGNMENT 2 Task 1 ANALYSIS REPORT**

by Alishba Tahir

This is my report about the different local feature detectors and feature matchers for 3 sets of matching data. I thought it would be better represented in the form of a table. My observations are as follows:

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Image Sets** | **Images and Applied Feature Matchers** | | **Local Feature Detectors & Descriptors** | | | | | | | | | | | | | | | |
| **ORB** | | | **BRIEF** | | | **FAST** | | | **SIFT** | | | **SURF** | | | |
| **Book Image Set** | **Images** | **Book** | Good Amount Detected (500) | | | Fair detected (242) | | | More Detected (4786) | | | More Detected (1379) | | | Many Detected | | | |
| **Book\_person\_holding** | Good Amount Detected (500) | | | Less detected (68) | | | Good Amount Detected (987) | | | Good Amount Detected (582) | | | Many Detected | | | |
| **Feature Matchers** | **Brute Force Matcher** | Many Right | | | None Right | | | Close to None Right | | | No Matches | | | ALL Right (except 1) | | | |
| **FLANN Based Matcher** | Less Right | | | None Right | | | Not at all right | | | 1 Match (Wrong) | | | Less Right | | | |
| **Roma Image Set** | **Images** | **Roma\_1** | Good Amount Detected (500) | | | More Detected (2951) | | | So Many Detected (28171) | | | Many Detected (9838) | | | Many Detected (13048) | | | |
| **Roma\_2** | Good Amount Detected (500) | | | Many Detected (7233) | | | So Many Detected (58013) | | | So Many Detected (30199) | | | So Many Detected (26120) | | | |
| **Feature Matchers** | **Brute Force Matcher** | Most Wrong | | | All Wrong | | | All Wrong | | | No Matching | | | Mostly Wrong | | | |
| **FLANN Based Matcher** | All Wrong | | | Completely Wrong | | | Completely Wrong | | | 1 Match (Right) | | | Mostly Wrong | | | |
| **Building Image Set** | **Images** | **Building\_1** | Good Amount Detected (500) | | | More Detected (1610) | | | So Many Detected (52044) | | | Many Detected (11071) | | | Many Detected (11147) | | | |
| **Building\_2** | Good Amount Detected (500) | | | More Detected (1201) | | | So Many Detected (16493) | | | Many Detected (6636) | | | Many Detected (11046) | | | |
| **Building\_3** | Good Amount Detected (500) | | | Good Amount Detected (507) | | | Many Detected (8597) | | | Many Detected (3713) | | | Many Detected (7829) | | | |
| **Feature Matchers** | **Matching Combinations =>** | **B1-B2** | **B1-B3** | **B2-B3** | **B1-B2** | **B1-B3** | **B2-B3** | **B1-B2** | **B1-B3** | **B2-B3** | **B1-B2** | **B1-B3** | **B2-B3** | | **B1-B2** | **B1-B3** | **B2-B3** |
| **Brute Force Matcher** | M.W | M.W | M.R | L.R | S.R | A.R | A.W | L.R | L.R | N | N | N | | M.W | L.R | L.R |
| **FLANN Based Matcher** | M.W | S.R | A.W | A.W | A.W | L.R | C.W | C.W | A.W | 1.R | 1.R | N | | M.W | L.R | S.R |

**Key (least to most Detected):**

* Poor/none
* Less
* Fair
* Good
* More
* Many
* So Many

**For Matches:**

M.W = Mostly Wrong

S.R = Some Right

M.R = Most Right

A.W = All Wrong

L.R = Less Right

A.R = All Right

C.W = Completely Wrong

N = No Matching

1.R = 1 Match (Right)