

Outputs:

- **Finding User Similarity based on Textual Descriptors (Task 1):**

- **Input:**

- **39052554@N00 TF 5**
 - **56087830@N00 DF 8**
 - **56087830@N00 TF-IDF 5**

- **Output:**

Most Similar Users for User ID = 39052554@N00 , k = 5 , Metric = TF

USING COSINE SIMILARITY:

[0.8660254037844386, '9688281@N07', ['tower', 15], ['bok', 15], ['garden', 15]]
[0.78899453419359789, '93858545@N00', ['bok', 16], ['tower', 21], ['garden', 30]]
[0.74382705552069706, '83006240@N00', ['tower', 15], ['bok', 15], ['garden', 15]]
[0.74198223321626933, '93283041@N00', ['tower', 7], ['bok', 7], ['garden', 12]]
[0.69635751816394442, '9939138@N05', ['tower', 0], ['bok', 0], ['2011', 0]]

Most Similar Users for User ID = 56087830@N00 , k = 8 , Metric = DF

USING COSINE SIMILARITY:

[0.65326110675648852, '13597419@N00', ['view', 0], ['tower', 0], ['light', 0]]
[0.6035439187783086, '61577908@N00', ['view', 0], ['href', 0], ['blue', 0]]
[0.5764538541433728, '25334641@N08', ['view', 0], ['service', 0], ['tower', 0]]
[0.56756469630405604, '23072179@N00', ['view', 0], ['tower', 0], ['st', 0]]
[0.56644262960507596, '31363949@N02', ['view', 0], ['tower', 0], ['parliament', 0]]
[0.56593989609703133, '54037354@N00', ['view', 0], ['tower', 0], ['href', 0]]
[0.55662815385473785, '90384027@N00', ['view', 0], ['service', 0], ['tower', 0]]
[0.54786993042735754, '27749836@N02', ['view', 0], ['tower', 0], ['room', 0]]

Most Similar Users for User ID = 56087830@N00 , k = 5 , Metric = TF_IDF

USING COSINE SIMILARITY:

[0.11307966972292349, '24298372@N04', ['eye', 0.0], ['tower', 0.019417475728155345], ['big', 0.03125]]
[0.082636825208394882, '21021733@N00', ['view', 0.0], ['light', 0.0], ['bus', 0.0]]
[0.078179193763781574, '57474170@N05', ['big', 0.0], ['ben', 0.0], ['statue', 0.0]]
[0.059185167698207031, '29057345@N04', ['whitehall', 0.0], ['london', 0.0], ['cab', 0.0]]
[0.044745860240793855, '23377363@N04', ['big', 0.0], ['ben', 0.0], ['clock', 0.0]]

- **Finding Image Similarity based on Textual Descriptors (Task 2):**

- **Input:**

- 4459178306 TF 10
 - 288051306 DF 5
 - 288051306 TF-IDF 5

- **Output:**

Most Similar Images for Image ID = 4459178306 , k = 10 , Metric = TF

USING COSINE SIMILARITY:

[1.0, '4459180662', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4459177806', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4459177390', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4459176836', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4459176664', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4459175892', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4458401195', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4458401155', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4458397751', ['islamic', 0], ['stage', 0], ['mahal', 0]]

[1.0, '4458397675', ['islamic', 0], ['stage', 0], ['mahal', 0]]

Most Similar Images for Image ID = 288051306 , k = 5 , Metric = DF

USING COSINE SIMILARITY:

[0.94277363355767685, '135114844', ['lost', 0], ['harem', 0], ['forced', 0]]

[0.75136239811362759, '135116270', ['cella', 0], ['battle', 0], ['greekmythology', 0]]

[0.71385397272042383, '135116101', ['battle', 0], ['ly', 0], ['unesco', 0]]

[0.71385397272042383, '135115983', ['battle', 0], ['ly', 0], ['unesco', 0]]

[0.71149519021613394, '135116324', ['three', 0], ['greekmythology', 0], ['mythology', 0]]

Most Similar Images for Image ID = 288051306 , k = 5 , Metric = TF_IDF

USING COSINE SIMILARITY:

[0.64412430410436683, '135114844', ['theory', 0.0], ['construction', 0.0], ['respite', 0.0]]

[0.068357760244228571, '9069976672', ['greece', 0.0], ['athen', 0.0065789473684210523], ['acropoli', 0.0066889632107023419]]

[0.063354458308881756, '5251535876', ['acropoli', 0.0], ['greece', 0.0], ['athen', 0.0065789473684210523]]

[0.051838204607803418, '3298563892', ['north', 0.005893909626719057], ['porch', 0.25925925925925924]]

[0.048063167614631586, '7545557650', ['north', 0.005893909626719057], ['porch', 0.25925925925925924]]

- **Finding Location Similarity based on Textual Descriptors (Task 3):**

- **Input:**

- 27 TF 5
- 6 DF 5
- 6 TF-IDF 7

- **Output:**

Most Similar Locations for Loc ID = 27 , Location = christ_the_redeemer_rio , k = 5 Metric = TF

USING COSINE SIMILARITY:

[0.31900520615279526, 'arc_de_triomphe', ['calling', 0], ['sound', 0], ['leave', 0]]

[0.28727872775354335, 'casa_rosada', ['completa', 0], ['os', 0], ['original', 0]]

[0.22506575739495838, 'la_madeleine', ['sky', 0], ['breakfast', 0], ['2007', 0]]

[0.16489391798749209, 'castillo_de_san_marcos', ['radio', 0], ['unique', 0], ['wonderful', 0]]

[0.16340314012579782, 'pont_alexandre_iii', ['2011', 0], ['crowd', 0], ['beautiful', 0]]

Most Similar Locations for Loc ID = 6 , Location = neues_museum , k = 5 Metric = DF

USING COSINE SIMILARITY:

[0.58762708745602954, 'altes_museum', ['es', 0], ['ein', 0], ['reichstag', 0]]

[0.567349614692641, 'arc_de_triomphe', ['great', 0], ['es', 0], ['ein', 0]]

[0.5470737962594342, 'acropolis_athens', ['great', 0], ['sculpture', 0], ['entrance', 0]]

[0.53960140693737502, 'albert_memorial', ['great', 0], ['sculpture', 0], ['entrance', 0]]

[0.53315717739182478, 'cologne_cathedral', ['great', 0], ['sculpture', 0], ['entrance', 0]]

Most Similar Locations for Loc ID = 6 , Location = neues_museum , k = 7 Metric = TF_IDF

USING COSINE SIMILARITY:

[0.25911033836531616, 'berlin_cathedral', ['great', 0.0], ['1944', 0.0], ['torn', 0.0]]

[0.20876609563178339, 'altes_museum', ['reichstag', 0.0], ['conception', 0.0], ['russie', 0.0]]

[0.1784746786117779, 'brandenburg_gate', ['spree', 0.0], ['6', 0.0], ['1944', 0.0]]

[0.0072687322757626349, 'arc_de_triomphe', ['great', 0.0], ['qu en', 0.0], ['2013', 0.0]]

[0.006042805597161971, 'casa_rosada', ['había', 0.0], ['western', 0.0], ['rose', 0.0]]

[0.0054790111688380883, 'pont_alexandre_iii', ['2013', 0.0], ['direction', 0.0], ['signe', 0.0]]

[0.0037519910760882569, 'la_madeleine', ['proche', 0.0], ['seul', 0.0], ['park', 0.0]]

- **Finding Location Similarity based on Visual Descriptors and given model (Task 4):**

- **Input:**

- 10 CN3x3 7
- 18 GLRLM 5
- 30 LBP3x3 5

- **Output:**

Similarity score for location id: 10 location name: agra_fort Model: CN3x3 k: 7

Cosine Similarity:

[7, 'montezuma_castle', 68.348171969249208, [['8556157095.0', '5542405595.0', 0.96436869608320719], ['6494673379.0', '8514759660.0', 0.93097967325921094], ['6494691793.0', '8514763212.0', 0.92773887200871397]]]

[9, 'acropolis_athens', 66.365376909008233, [['6494691793.0', '8493294360.0', 0.9200410324701207], ['6624622199.0', '6798572025.0', 0.91131120005382704], ['6624627301.0', '8493324986.0', 0.9094361068259188]]]

[22, 'casa_batillo', 65.326034534508068, [['6624627301.0', '6279986418.0', 0.90936245189318321], ['6044966447.0', '6492335561.0', 0.90492694282102559], ['6044961427.0', '6492330635.0', 0.89205753087519457]]]

[12, 'altes_museum', 64.696114852946195, [['6494691793.0', '5207618276.0', 0.95493766914293232], ['3770817415.0', '8718331282.0', 0.95112859176517306], ['8717212077.0', '0.94349971432122637]]]

[26, 'chichen_itza', 64.396398312964166, [['6624627301.0', '5554650108.0', 0.92789020453584881], ['5715461357.0', '6280492506.0', 0.91370853231885174], ['9960455216.0', '8265051998.0', 0.90922644618125315]]]

[16, 'arc_de_triomphe', 64.201547349109291, [['3770817415.0', '8374000518.0', 0.94150183736975934], ['3770801661.0', '8373991722.0', 0.93450761694474371], ['6624622199.0', '5408453349.0', 0.92350876496051415]]]

[30, 'colosseum', 64.128788282931893, [['3770817415.0', '72865178.0', 0.9162127976736939], ['3770801661.0', '9558072356.0', 0.89918335415375739], ['2433676472.0', '946558196.0', 0.89429432843978629]]]

Similarity score for location id: 18 location name: berlin_cathedral Model: GLRLM k: 5

Cosine Similarity:

[9, 'acropolis_athens', 96.283012083780662, [['9538786930.0', '8492150179.0', 0.99953967386168951], ['5992433354.0', '9067739127.0', 0.99942098441240779], ['9069965246.0', '0.99935903070312249]]]

[24, 'castillo_de_san_marcos', 95.815961961384133, [['9538774254.0', '2457745846.0', 0.99986528130196695], ['9538710516.0', '2212304635.0', 0.9997178434898667], ['9527521558.0', '9838838294.0', 0.99967108648817549]]]

[16, 'arc_de_triomphe', 95.646854287447312, [['9538749988.0', '3161412996.0', 0.99968610564019178], ['9527521558.0', '534636361.0', 0.99955483508332854], ['9538710516.0', '4650183745.0', 0.99932067225856624]]]

[28, 'civic_center_san_francisco', 95.580479688044775, [['9524802541.0', '4846890949.0', 0.99973617763498046], ['9527576532.0', '481406552.0', 0.99972730579260927], ['8755407226.0', '0.99941722492429597]]]

[22, 'casa_batillo', 95.526279978865531, [['9538710516.0', '2351628249.0', 0.99970676078699672],
['9535975141.0', '6492339963.0', 0.99968220316952094], ['9538786930.0', '5230231168.0',
0.99959818632068553]]]

Similarity score for location id: 30 location name: colosseum Model: LBP3x3 k: 5

Cosine Similarity:

[17, 'aztec_ruins', 96.282805182735629, [['4928049724.0', '3410052743.0', 0.99561984329315856],
['7639998126.0', '4707151533.0', 0.99357356568446131], ['9554979731.0', '9027425329.0',
0.99210134639994829]]]

[9, 'acropolis_athens', 96.135742029268144, [['8561274812.0', '5999524850.0',
0.99001795825030015], ['5129765888.0', '4308770173.0', 0.98912922514188495], ['9554979731.0',
'9069965246.0', 0.98906390739736416]]]

[26, 'chichen_itza', 96.026195812868735, [['9554979731.0', '8263945135.0', 0.99283334770056775],
['8838667969.0', '7037637227.0', 0.9921432309627285], ['9558142764.0', '8263968081.0',
0.99184304460302186]]]

[3, 'hearth_castle', 95.998277620289088, [['9554979731.0', '9423395702.0', 0.99092222837535182],
['9555237605.0', '9420625927.0', 0.98940287262256532], ['8838667969.0', '4772449560.0',
0.98836363613658595]]]

[10, 'agra_fort', 95.984588759004367, [['9554979731.0', '8556155993.0', 0.99164544388602827],
['3885459460.0', '5350737652.0', 0.99162535347100444], ['8838667969.0', '6624618545.0',
0.99004956942578215]]]

- **Finding Location Similarity based on Visual Descriptors and all models (Task 5):**

- **Input:**

- 4 5

- **Output:**

14 angkor_wat (29 / 50)

Model: CM , Similarity Score: 58.6140243018 , Rank: 3

Model: CM3x3 , Similarity Score: 43.4768511265 , Rank: 2

Model: CN , Similarity Score: 60.2857346628 , Rank: 2

Model: CSD , Similarity Score: 59.2378008965 , Rank: 1

Model: GLRLM , Similarity Score: 68.2380855081 , Rank: 1

Model: GLRLM3x3 , Similarity Score: 55.5331797116 , Rank: 3

Model: HOG , Similarity Score: 68.0999330082 , Rank: 1

26 chichen_itza (20 / 50)

Model: CM3x3 , Similarity Score: 44.5128756957 , Rank: 1

Model: CN , Similarity Score: 59.7636532223 , Rank: 3

Model: CN3x3 , Similarity Score: 47.3322388364 , Rank: 5

Model: GLRLM3x3 , Similarity Score: 55.8743503982 , Rank: 2

Model: HOG , Similarity Score: 67.6752555977 , Rank: 4

Model: LBP , Similarity Score: 69.2395597469 , Rank: 4

Model: LBP3x3 , Similarity Score: 67.0256376152 , Rank: 3

9 acropolis_athens (13 / 50)

Model: CM3x3 , Similarity Score: 41.1844538423 , Rank: 3

Model: HOG , Similarity Score: 68.0322656385 , Rank: 2

Model: LBP , Similarity Score: 69.222877241 , Rank: 5

Model: LBP3x3 , Similarity Score: 67.2210817401 , Rank: 1

17 aztec_ruins (10 / 50)

Model: CN , Similarity Score: 58.8573472758 , Rank: 5

Model: CN3x3 , Similarity Score: 47.7882723054 , Rank: 2

Model: GLRLM , Similarity Score: 67.6064613852 , Rank: 2

Model: GLRLM3x3 , Similarity Score: 54.9873062168 , Rank: 5

30 colosseum (10 / 50)

Model: CM3x3 , Similarity Score: 40.7670597754 , Rank: 4

Model: CN , Similarity Score: 59.6657629372 , Rank: 4

Model: CN3x3 , Similarity Score: 48.6442637298 , Rank: 1

Model: GLRLM , Similarity Score: 66.9861387194 , Rank: 5