

## CSI2120 - Project Part 4

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### Outputs for query images:

Query image name	List of 5 most similar images
q00.jpg.txt	S = [('1144.jpg.txt', 0.9999999999999998), ('3806.jpg.txt', 0.707453703703704), ('3714.jpg.txt', 0.668431712962963), ('3756.jpg.txt', 0.6620254629629629), ('2462.jpg.txt', 0.6491030092592592)] ;
q01.jpg.txt	S = [('3588.jpg.txt', 0.5703645833333334), ('2536.jpg.txt', 0.5612557870370372), ('3553.jpg.txt', 0.5365624999999999), ('1875.jpg.txt', 0.5282986111111111), ('2592.jpg.txt', 0.5049710648148149)] ;
q02.jpg.txt	S = [('1091.jpg.txt', 0.654351851851852), ('3005.jpg.txt', 0.6425925925925926), ('850.jpg.txt', 0.6293344907407409), ('3728.jpg.txt', 0.6242418981481477), ('1090.jpg.txt', 0.6235821759259259)] ;
q03.jpg.txt	S = [('1255.jpg.txt', 0.5487037037037037), ('3532.jpg.txt', 0.5420949074074074), ('4507.jpg.txt', 0.5384143518518519), ('692.jpg.txt', 0.5370486111111111), ('4737.jpg.txt', 0.5314583333333334)] ;
q04.jpg.txt	S = [('1799.jpg.txt', 0.8465046296296295), ('848.jpg.txt', 0.493396990740741), ('4261.jpg.txt', 0.4890682870370373), ('1800.jpg.txt', 0.4714351851851855), ('1937.jpg.txt', 0.4680844907407409)] ;
q05.jpg.txt	S = [('2223.jpg.txt', 0.6143576388888888), ('3091.jpg.txt', 0.600127314814815), ('2550.jpg.txt', 0.5303530092592593), ('2883.jpg.txt', 0.5288252314814816), ('2901.jpg.txt', 0.522957175925926)] ;
q06.jpg.txt	S = [('2278.jpg.txt', 0.775943287037037), ('2224.jpg.txt', 0.7166724537037038), ('1108.jpg.txt', 0.7126793981481481), ('1917.jpg.txt', 0.6976967592592592), ('3806.jpg.txt', 0.6947453703703704)] ;
q07.jpg.txt	S = [('2377.jpg.txt', 1.0), ('2379.jpg.txt', 0.7670370370370372), ('2079.jpg.txt', 0.639664351851852), ('1653.jpg.txt', 0.6341377314814816), ('1896.jpg.txt', 0.622175925925926)] ;
q08.jpg.txt	S = [('2587.jpg.txt', 0.723240740740741), ('1837.jpg.txt', 0.7008912037037036), ('2586.jpg.txt', 0.6713831018518517), ('1515.jpg.txt', 0.6691203703703701), ('1217.jpg.txt', 0.667974537037037)] ;
q09.jpg.txt	S = [('2839.jpg.txt', 0.7902141203703702), ('3414.jpg.txt', 0.5090219907407406), ('2617.jpg.txt', 0.4510706018518519), ('4363.jpg.txt', 0.4242534722222222), ('4816.jpg.txt', 0.3847106481481482)] ;
q10.jpg.txt	S = [('2976.jpg.txt', 0.7448495370370368), ('2971.jpg.txt', 0.6602488425925923), ('3108.jpg.txt', 0.6443113425925926), ('2194.jpg.txt', 0.641255787037037), ('4118.jpg.txt', 0.6342650462962962)] ;

q11.jpg.txt	S = [('3017.jpg.txt', 0.6110358796296296), ('3660.jpg.txt', 0.5757696759259259), ('2411.jpg.txt', 0.5699594907407405), ('1010.jpg.txt', 0.5557928240740738), ('2067.jpg.txt', 0.5535937499999999)] ;
q12.jpg.txt	S = [('3135.jpg.txt', 1.0), ('3133.jpg.txt', 0.6417650462962963), ('2447.jpg.txt', 0.5733854166666664), ('4429.jpg.txt', 0.5432870370370371), ('2964.jpg.txt', 0.512349537037037)] ;
q13.jpg.txt	S = [('3225.jpg.txt', 0.9999999999999994), ('2083.jpg.txt', 0.49487268518518523), ('2082.jpg.txt', 0.4945370370370373), ('2078.jpg.txt', 0.48898148148148146), ('2607.jpg.txt', 0.47237847222222196)] ;
q14.jpg.txt	S = [('2193.jpg.txt', 0.44631365740740736), ('3108.jpg.txt', 0.38057291666666665), ('3318.jpg.txt', 0.37972800925925926), ('4028.jpg.txt', 0.3712037037037037), ('3085.jpg.txt', 0.37054398148148143)] ;
q15.jpg.txt	S = [('4756.jpg.txt', 0.7374768518518519), ('2462.jpg.txt', 0.72366319444444442), ('3756.jpg.txt', 0.6971238425925923), ('908.jpg.txt', 0.6936805555555557), ('3675.jpg.txt', 0.692372685185185)] ;

**\*\*NOTE: When running the predicate after consulting the file, put the full file path of the query image. Ex:**  
**similarity\_search('/Users/michaelmassaad/Documents/SECOND/CSI2120/ProjectDeliverables/CSI-2120-Programming-Paradigms/CSI2120ProjectPart4/queryImages/q00.jpg.txt',S).**

### **References**

- 1) The lecture notes were also used as a guide and reference
- 2) *Prolog -- ATOMIC\_LIST\_CONCAT/3*. SWI. (2020, July 19).  
[https://www.swi-prolog.org/pldoc/man?predicate=atomic\\_list\\_concat%2F3](https://www.swi-prolog.org/pldoc/man?predicate=atomic_list_concat%2F3)
- 3) *Prolog -- Function Min/2*. SWI. (2021, June 10).  
<https://www.swi-prolog.org/pldoc/man?function=min%2F2>