**COEN 352 Final Project**

*~ evaluation criteria ~*

Option A. Retrieve All Stored Vectors within a Threshold Distance of a Cue Vector

½ the Project Mark is for Program (evaluated by Marker)

* 10% Program Correctness: the program does what it’s supposed to do and does it without crashing, given valid inputs.
* 20% Program Originality: though ideas for the program can be borrowed from a multiplicity of external sources, the source code itself (but for external libraries with functions implementing *basic* data structures and algorithms) must be written and understood by the student him/herself.
* 10% Data Handling: especially any pre-processing and post-processing of images.
* 35% Implementation Quality: especially, the appropriateness and quality of image\_mapping/hashing function, implementation of B+Tree/hash table.
* 25% Output (during demo): this includes both output *correctness* and *speed* of recall, which should not exceed seconds, not minutes.

½ the Project Marks is for Report (evaluated by Instructor)

* 30% **Methods**: ideally, the implemented algorithms should be described so clearly and comprehensively, as to allow a skilled programmer to implement them in a program and get the same results you did. In brief, the descriptions of your methods should allow for the accurate and precise the *reproducibility* of your program.
* 40% **Results**: ideally, your algorithm as implemented in your program should strive to achieve the best possible level of *effectiveness & efficiency*. This means that your image range search or sorting algorithm optimizer should use appropriate algorithms and data structures, run on a standard PC, and returning results within reasonable times.
* 10% **Analysis & Conclusion, Recommendations**: *discuss* your results, arriving at *justified* conclusions and hence, thoughtful recommendations for future *improvements*.
* 20% **Writing Quality**: *clarity & completeness, organization and formatting*.

+ 5% Bonus: for any and all projects that exhibit excellent program performance, especially *speed* and *accuracy* of recall of similar images, as well as professional *reporting*.

Option B. Devise a Meta-Algorithm that Optimizes a Sorting Algorithm

½ the Project Mark is for Program (evaluated by Marker)

* 10% Program Correctness: the program does what it’s supposed to do and does it without crashing, given valid inputs.
* 20% Program Originality: though ideas for the program can be borrowed from a multiplicity of external sources, the source code itself (but for external libraries with functions implementing *basic* data structures and algorithms) must be written and understood by the student him/herself.
* 10% Data Handling: especially any pre-processing and post-processing of lists.
* 35% Implementation Quality: especially, the appropriateness and quality of representation, evaluation functions (for effectiveness and efficiency), add/delete/modify mutations (and how they’re used), selection criteria (for the new individual).
* 25% Output (during the demo): this includes both output *correctness* and *speed* of recall, which should not exceed seconds, not minutes.

½ the Project Marks is for Report (evaluated by Instructor)

* 30% **Methods**: ideally, the implemented algorithms should be described so clearly and comprehensively, as to allow a skilled programmer to implement them in a program and get the same results you did. In brief, the descriptions of your methods should allow for the accurate and precise the *reproducibility* of your program.
* 40% **Results**: ideally, your algorithm as implemented in your program should strive to achieve the best possible level of *effectiveness & efficiency*. This means that your image range search or sorting algorithm optimizer should use appropriate algorithms and data structures, run on a standard PC, and returning results within reasonable times.
* 10% **Analysis & Conclusion, Recommendations**: *discuss* your results, arriving at *justified* conclusions and hence, thoughtful recommendations for future *improvements*.
* 20% **Writing Quality**: *clarity & completeness, organization and formatting*.

+ 5% Bonus: for any and all projects that exhibit excellent program performance, especially *effectiveness* and *efficiency* of evolved sorting algorithms, on all four data sets, as well as professional *reporting*.