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To Do List

This Document describes the planned to-do list items and their locations in the dissertation document.

Tasks	**Location in Thesis**
1. Explore and run experiments on optimization schemes for MICI, MICIR and MR-MICI algorithms. Investigate: 1.1 sample new measure from top-down for initialization 1.2 sample new measure from bottom-up for initialization 1.3 sampling according to the size of the valid intervals in small-scale and large-scale mutation 1.4 sampling according to fitness in small-scale and large-scale mutation *(sampling according to measure element)* 1.5 alternate optimization approaches for speed *(Binary FM)* Evaluate the effects of the optimization schemes on how much objective function fitness value changes and speed of convergence.	Section 6.4
2. Evaluate how parameters affect MICI, MICIR and MR-MICI algorithms and if one algorithm is more likely to do better than the other.	Sections 6.1.3; 6.3.1; 6.3.2
3. Run MICI Regression experiments and present results on HAVIST crop yield data set. Compare MICIR with linear regression, polynomial curve fitting, RVM Regression, MI-ClusterRegress, Aggregated MIR and Instance-MIR methods.	Section 6.3.2
4. MR-MICI experiments: 4.1 Run on full MUUFL Gulfport image (rather than current sub-image) 4.2 Generate ground truth map for building, sidewalk and road classes 4.3 Compare MR-MICI results with CI-QP, MI-SVM, and SVM, GML-LOOC and kNN classifier and Multiple Feature Learning based on Attribute Profiles, using HSI and rasterized LiDAR 4.4 Explore MR-MICI fitness evaluation methods: pick points by sampling from a multinomial or max-min 4.5 Run on a new data set	Sections 6.2.3 & 6.2.4
5. Use conflation to obtain labels (rather than current affine transformation based on manual points).	Section 6.2.3
6. Investigate how normalization based on distribution in preprocessing affects the CI performance. Compare to current linear normalization.	Section 6.1.4

Tasks - continued	**Location in Thesis**
7. Investigate adding a weight/emphasis to either positive or negative bags.	Section 6.1.3
8. Investigate the influence of: 8.1 number of positive and negative bags 8.2 number of positive and negative points in each bag 8.3 how mixed each positive bag is 8.4 contamination on MICI, MICIR and MR-MICI algorithms.	Sections 6.1.3; 6.3.1; 6.3.2
9. Analyze computation complexity.	Sections 6.1.4; 6.4.3
10.Clean up code and post well-commented code on GitHub repository.	On GitHub