

Statements of Individual Contributions

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Abstract

This document details the individual contributions of each group member to the outcome of the group project, benchmarking “Indicator-based Evolutionary Algorithm with Epsilon indicator” with the COCO platform. It also includes an anti-plagiarism phrase that needs to be signed by every group member.

Individual Contributions to the Group

Daro Heng

Designed the datastructure to manage memory complexity making the code run safely and timely. Experimented with mutation operators and step-size adaptation. Identified and resolved implementation issues.

Karim Kouki

Helped with the basic structure of the algorithm thanks to article understanding. Tuned parameters based on observations of previous runs and intuition. Developed a grid search script to run configurations in parallel: assuming the tuning of hyper-parameters is separable, we tried several neighboring sets of parameters and thus identified the best runs.

Ahmed Mazari

Contributed to the basic structure of the algorithm. Suggested alternative strategies by selecting complementary articles when the runs were not satisfying. Lead extensive tests on the isotropic mutation to better understand the performance of this strategy on the entire suite of functions. Scheduled weekly group meetings.

Mihaela Sorostinean

Coordinated the group’s members, kept track of the project’s roadmap, helped with reporting, and put ideas together. Investigated and understood the bibliography, gave possible directions to explore and also interpreted runs of the algorithm.

Aris Tritas

Implemented the algorithm and recombination operators. Helped with the implementation of step-size adaptation functions and hyper-parameter grid search. Managed the source code version control and LaTeX integration.

Anti-Plagiarism Statement

All group work, be it the source code, the documentation, the report, the presentation, or any other contribution have been solely written by the group members or corresponding reused parts have been cited accordingly. We, the group members, confirm herewith as well that we all have read and understood the “What is plagiarism” page of <http://www.plagiarism.org/plagiarism-101/what-is-plagiarism/>.

Date: October 21, 2016

Signatures of the group members: