Høyskolen Kristiania

Emnekode: PIT9206
Emnenavn: Evolutionary Computation and Search-Based Software Engineering
Vurderingskombinasjon:
Utlevering/innleveringsdato:
Filformat: zip file

The exam is to deliver a project which must be submitted as **a zip file** (i.e., .zip). The exam project is to apply multiple search techniques to solve an optimization problem and conduct an experiment to compare the different techniques.

The exam project is divided into two parts,

Part 1. Tool
It must contain **a runnable program** and a **README.md file**.

The runnable program must employ at least one or more search algorithms and have at least two configurations representing different search techniques. The search algorithms can be one from https://github.com/arcuri82/ec-sbse or any search algorithm proposed in the literature. With the runnable program, you could implement the algorithm by yourself, or use any existing open-source library or toolkit.

In the README.md file, you must provide necessary information about
- how to run the program and
- how to replicate the experiment.

Part 2. Analysis
It must contain **raw data**, **an R script**, and **an analysis report in latex format**.

You must submit raw data produced in your experiments, and implement an R script which can perform statistical analysis on the raw data and generate tables or figures for visualizing the analyzed results.

In the analysis report, you must describe:
- the optimization problem you solve.
- the experiment design, such as, baseline selection, configurations to compare, stopping criterion and repetition (e.g., 10 times).
- results by one or more statistical tests represented in tables/figures.
- explanation and interpretation based on the results.
- threats to validity if any.
- conclusion.

Easy ways to get fail (any one as listed below):
- The project is not submitted as a zip file.

- The zip file is too large. Ideally, it should be less than 10MB, unless you have good reasons. If the raw data is too large, you could upload it to an accessible repository then provide a link in the analysis report. If using an existing tool that is too large, provide links and instructions on how to download it and install it.
- There is no README.md to show how to run the tool and replicate the experiment.
- The tool cannot be executed based on README.md.
- There is no R script.
- The analysis report is not in a latex format.
- The latex file cannot be compiled into PDF.