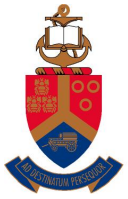

UNIVERSITEIT VAN PRETORIA
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COS 710: Artificial Intelligence
Assignment 2: Structure-Based Genetic Programming
Due Date: 3 May 2023, 23:30

In lectures we have discussed different approaches to structured-based genetic programming (SBGP). This assignment involves applying structure-based genetic programming to evolve a prediction model for the Seoul bike trip duration prediction problem from Assignment 1. Details of the problem are in the paper included in the assignment specification. The dataset for the problem can be accessed from `https://data.mendeley.com/datasets/gtfh9z865f/1`.

Assignments must be submitted via clickUP. The source code, compiled code and report must be submitted.

The report must include:

- Description of the SBGP approach employed.
- Any other extensions/changes to the GP algorithm employed in Assignment 1.
- The results (averages and best values for all four metrics discussed in the paper over the runs performed) and a discussion of the results. A minimum of 10 runs should be performed.
- Runtimes of the algorithm.
- A comparison with the performance and runtimes of the canonical GP algorithm implemented in Chapter 1.
- A comparison with the performance and runtimes of the approaches presented in the paper.

Total: 35