

## EPA133a Assignment 3 Rubric

| Criteria                                 | Description   | Weight |
|--|---|--------|
| Report                                   | <ul style="list-style-type: none"> <li>Explanation of data, model, experiments, and results are logical and understandable; clear link (reference) to the code submitted</li> <li>Routing mechanisms/algorithms used to create paths and assumptions made are clearly explained</li> <li>Relation and data exchange between MESA and NetworkX models are clearly documented (e.g., use diagrams, flowchart for clarity)</li> <li>Good visuals, with the comparison of scenarios and results; use, e.g., boxplots, histograms to visualise scenario results (avoid using long tables); for the figures included, non-trivial observations/insights from the visualisation are included. (This also means not every figure created is included.) Use a flow chart to visualise process if needed</li> <li>Discussion on differences between scenario outcomes</li> <li>Interesting relationships between different key performance indicators are reflected upon</li> <li>A brief reflection describing the limitations, possible improvement, extension, etc., of the solution</li> <li>Well-structured and concise report with conceptual and logical soundness</li> <li>Clear link to literature</li> <li>A final section of "Acknowledgement" that clarifies the use of AI, and the role/contribution of each team member in this assignment</li> </ul> | 4      |
| Data Preparation + Mesa + NetworkX Model | <ul style="list-style-type: none"> <li>Data well prepared for simulation to fulfil the goal of the assignment</li> <li>Data preparation process clearly reported: what you did, why you did it and why it satisfies the goals of the simulation Solution designed and implemented to fulfil the goal of the assignment</li> <li>Model runs without errors</li> <li>Solution designed and implemented to fulfil the goal of the assignment</li> <li>Vehicles are generated from both ends of roads; random paths are allotted to every vehicle generated, identified paths are stored and looked up by other vehicles</li> <li>Instantiation of components through data is clear and well-documented. Assumptions made to generate road segments, bridges and intersections from the raw data provided, are clearly documented in code (and explained in the report).</li> <li>Experiments are set up in a systematic manner (either for-loop or batch runner).</li> <li>Mechanisms exist to measure delays, travel time, etc.</li> <li>Use different seeds for the replications in a scenario</li> <li>Model built so that it is easily extendable towards a larger number of roads.</li> <li>Code (changes made by you) is well-structured and documented</li> </ul>   | 4      |
| Submission                               | <ul style="list-style-type: none"> <li>Submit in accordance with the submission guidelines</li> <li>Include a ReadMe file describing the necessary information to use your program</li> </ul>   | 2      |
| Total                                    |   | 10     |

- Fulfilment and reporting of the bonus exercises in this assignment count for 1 extra point in total.