

| Project Evaluation FIT5226 for (Group) | | insufficient | satisfactory | good | very good | outstanding |
|--|------------|--|---|---|---|---|
| NOTE all descriptors are cumulative | | a higher performance standard implicitly comprises all criteria of the lower standards in the same category | | | | |
| Solution and Functionality | 35% | The implementation does not compile/run or does not learn within the baseline budgets specified in the assignment. | The implementation performs Q-learning within the specified budgets and to the specified minimum performance level. Collision avoidance is learned to a substantial level but the specified collision performance level is not reached. The reward structure only uses information observable by the agent. | The implementation performs basic Q-learning within the specified budgets and to the specified minimum performance level. | The implementation performs Q-learning and learns the problem to the specified minimum performance level within less than 1,000,000 agent steps. | Learning procedure, evaluation, and visualisation are fully integrated so that testing can be performed with minimal user interaction steps. |
| Implementation and coding style | 15% | General lack of structure. Bare code without any comments. | Clean code with some level of comments but no self-sufficient documentation. | The code can be completely understood from the comments and documentation in the notebook alone. The notebook makes good use of Jupyter's support for literate programming. | The code is modularly well-structured: all model elements are cleanly separated and explicitly represented in the code (gridworld, agents, reward structure, action effects, etc) | The implementation is easily generalisable to variations of the problem (different grid sizes, different reward structures, new grid elements, such as blocked cells, etc.) |
| Visualisation (note that this may include animations but these are not compulsory) | 10% | No visualisation provided | Individual agent behaviour can be visualised but the connection to learning is not made explicitly | The visualisation clearly documents differences between "naive" agents and trained agents but may require additional explanation to be interpreted in the right way. | The visualisation is easily understood and documents the learning convincingly without requiring additional explanation. | The visualisation functionality does not require additional user intervention (such as selecting points in the learning). |
| Evaluation metrics, procedure & description | 10% | No evaluation metrics provided | metrics and evaluation procedure provide limited evidence of learning but are not beyond doubt | metrics and procedure provide solid evidence of learning ("proof") and are fully explained and documented; examples are provided. | assess the performance level of the learning and to compare variations of the implementation (e.g. different learning schedules). | Examples of performance comparisons using the metrics are provided. |
| Documentation & Interview | 30% | Only a basic run of the program is offered with no detailed explanation. | The learning process is documented and demonstrated, the progress of the learning (or lack thereof) are clearly demonstrated and a basic explanation of the implementation is given | Most question about the implementation are answered clearly and correctly. | All aspects of the code are explained in full detail. A comprehensive discussion of functionality is provided. All question are answered in a way that evidences full understanding of the implementation, functionality, and evaluation. | The learning process & outcomes are fully demonstrated & explained without any prompting being required. Documentation and discussion include adequate use of an evaluation metrics and visualisation as well as an clear interpretation of the policy learned. Limitations (if any) are fully explained. |