Project Feedback

Assessment: Final Report

Project: Mapless Navigation with Deep Reinforcement Learning

Student: Minghong Xu (201601082)

Supervisor: Murat Uney

Grade : 85 (Penalty: 5)

Supervisor's Marking:

Knowledge and Understanding: 22

Completion of Aims: 21

Research Achievements: 17

Intellectual and technical skills: 25

Feedback and comments on the thesis:

This is a student-specified project on reinforcement learning and robotics. It is a very challenging software project, which normally supervised would not ask from undergraduate level students. The student chose this project as part of his research agenda, which has its roots in a summer internship in one of the university's research labs. Thus, the literature survey has been carried out at a competent level of breadth and depth, especially given the undergraduate level of this project.

The achievements include a software library that implements reinforcement learning and a simulation platform to train policies in simulated scenarios. The total lines of code exceed more than 5K and can be verified on the GitHub repository.

The demo videos on the student's GitHub page cover a variety of scenarios and demonstrate that the reinforcement learning library learns working policies of mapless navigation. The implementation is objected oriented and demonstrates competent design skills.
Overall, this is a hard project executed well.

The report could demonstrate all the above achievements better, especially by detailing section 7.