I. IDENTIFICATION DATA

Thesis name:	"Allocation des Resource dynamique base sur les techniques d'apprentissage"
Author's name:	"Madelkhanova Aida"
Type of thesis :	master
Faculty/Institute:	Choose an item.
Department:	Click here to enter text.
Thesis reviewer:	Xenofon Vasilakos
Reviewer's department:	Electrical and Electronic Engineering, University of Bristol, UK

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment   **extraordinarily challenging**

Evaluation of thesis difficulty of assignment.

Very difficult. Involves a lot background study and there is a lack of similar application of the idea of RL, DRL, etc. in the new area of 5G slicing. Therefore, the student could not use anything else other than self-produced synthetic traces.

Satisfaction of assignment   **fulfilled with minor objections**

Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.

The student can improve the evaluation part a lot, by commenting more on the results presented. The load of results is high and looks significant, but the description and justification of the results is weak. Note, that the student has obviously spent a lot of time in authoring the background chapters.

Method of conception   **correct**

Assess that student has chosen correct approach or solution methods.

Good.

Technical level   **B - very good.**

Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.

My perception is that the student has achieved to study and learn very contemporary tools, machine learning concepts, and gained experiences on authoring reports and organizing evaluation experiments.

Formal and language level, scope of thesis   **C - good.**

Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.

Selection of sources, citation correctness   **A - excellent.**

Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.

The student has done a lot of good quality background study. This is seen in the literature review part of the report.

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

I believe that the student has put a lot of effort on a contemporary, original problem, with few other works (if any) on the same topic of RL and 5G slicing. The weak part of this thesis regards the commenting part of the evaluation, not necessarily the evaluation setup itself or the results included in the evaluation chapter.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

1) What is the definition of the "final reward"? How does that KPI metric denote the superiority of a model?
2) I would expect that DQN results are superior to other models'. However, this is not always seen when comparing the final results per test (e.g., AC seems the best choice in Figure 7.17). Can you elaborate on that?
3) It must be made clear to the student that her evaluation skills must be significantly improved. This involves improving both visual presentation (graphs) and results discussion in text, while also conducing a more in-depth analysis of results (e.g., by comparison between different scenarios' results), use cases, etc. Last, the student must work more on justifying experimental setup: why they choose to use certain use cases, scenarios, parameters; how their choices can generalize to capture realistic environment needs and up to what degree, etc.

I evaluate handed thesis with classification grade **B - very good.**

Date: **21.1.2020**   Signature: