I. IDENTIFICATION DATA

Thesis name:	**Behavioural classification of network devices**
Author's name:	**Bc. Vojtěch Outrata**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science
Thesis supervisor:	Ing. Martin Kopp, Ph.D
Supervisor's department:	Cisco Systems, Data Science Department, Prague

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	**challenging**

Evaluation of thesis difficulty of assignment.

The thesis main topic are temporal graph neural networks that are cutting edge topic. The application domain possesses challenges on its own. In combination the student had to apply and adapt cutting edge methods in a very challenging application domain.

Satisfaction of assignment	**fulfilled**

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.

Assignment fulfilled without any shortcomings.

Activity and independence when creating final thesis	**A - excellent.**

Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.

The student was exemplary, consulted often, always came prepared and often went far beyond what we agreed on during the last consultation.

Technical level	**A - excellent.**

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

Again, the student presented an exemplary understanding of the cutting-edge methods he was working with. Reading, implementing, modifying and improving algorithms from scientific papers and applying them in the challenging domain. The student worked with data obtained from real computer networks, with all the caveats of real data.

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

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

As far as I can tell, the student technical writing is on a very good level. The technical parts are very well written. Sometimes student struggled a bit while addressing the motivation and implications of his work in plain words. The usage of formal notation is consistent and correct.

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.

Very relevant and very recent literature is cited according to the best standards. Also, the student made it very clear what is knowledge based on literature and what is his original contribution.

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.
We would like to publish the extended version of results presented in this thesis at a scientific conference. The main contribution "Snapshot GNN" is fair advancement to the current state of the art.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation.

Overall Vojtěch did an excellent job. He clearly demonstrated the ability to understand the state-of-the-art literature, implement, compare and improve current temporal graph neural networks and apply them to a challenging domain. With his main contribution, snapshot GNN, he achieved publishable results.

Therefore, I classify this thesis with a grade **A - excellent.**

Date: **12.6.2023**   Signature: Martin Kopp