

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>Classification of Intrapartum Fetal Heart Rate Signals</b>
<b>Author's name:</b>	<b>Mohamed Safwat</b>
<b>Type of thesis :</b>	bachelor
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	Department of Cybernetics
<b>Thesis reviewer:</b>	Ing. Jiří Spilka Ph.D.
<b>Reviewer's department:</b>	CIIRC, ČVUT v Praze

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>ordinarily challenging</b>
<i>How demanding was the assigned project?</i>	
The thesis focuses on classification of fetal heart rate signal with the use of machine learning methods. The task required advanced knowledge of machine learning methods and their use that is not completely covered in the bachelor program.	

<b>Fulfilment of assignment</b>	<b>fulfilled</b>
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
The assignment was fulfilled.	

<b>Activity and independence when creating final thesis</b>	<b>B - very good.</b>
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
Mohamed Safwat has a positive attitude towards the work and is interested in machine learning and learning new things in general. Communication with Mohamed was easy and he answered all the requests promptly. Mohamed worked independently and pursued and explored his own ideas. The only problematic part was writing the report in timely fashion. He handed in the report at the very last moment and I was not able to review and comment on it extensively.	

<b>Technical level</b>	<b>C - good.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
The technical level of the thesis is acceptable. The machine learning methods are used correctly and the approach to solve the problem is correct as well. However, the description of the methodology and machine learning methods in the report is superficial and should contain more details and explanations. The related work is also mentioned very briefly. Further, the selection of methods and decisions should be better justified and the interpretation and critical analysis of results should be more comprehensive and profound.	

<b>Formal level and language level, scope of thesis</b>	<b>C - good.</b>
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The thesis is written in acceptable English. It contains typos and sometimes the wording is incorrect but in general, the text is clear and understandable. The description of machine learning methods should be more extensive and detailed and should be grouped together and not scattered throughout the thesis.	

**Selection of sources, citation correctness****B - very good.**

*Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?*

References are sufficient and used correctly. In my opinion the selection is adequate and meets the standards for bachelor thesis.

**Additional commentary and evaluation (optional)**

*Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.*

Please insert your comments here.

**III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE**

*Summarize your opinion on the thesis and explain your final grading.*

The thesis meets the standards for bachelor theses at the Faculty of Electrical Engineering.

It correctly uses methods from machine learning to classify fetal heart rate signals and provides verification of several interesting hypotheses. However, the report should have been written with more details.

The grade that I award for the thesis is **C - good**.

Date: **1.9.2020**

Signature: