

Assessment criteria for Thesis based on IT topics
(for Business Informatics BSc, MSc, Computer Science Bsc)

Title of training / major: Computer Science BSc,
Name of candidate: Kola-Olaleye Adeola Damilola
Neptun code of candidate: BENP1Z
Title of Degree Thesis: Global Optimization Libraries on The Top Of TensorFlow.js
Opponent of Degree Thesis: Dr. Kégl Tamás (*belső konzulens*)

CRITERIA OF EVALUATION	Scores available	Scores obtained
The assessment of the topic selection, the method of presenting the problem and formulating the objectives	0-8	7
a) It does not present any relevant IT /methodological, business/economical problem	0	
b) Examination of a realistic, but small-scale IT or business problem, the purpose of research is not clear.	1-3	
c) Current, good topic selection, but the purpose of research is not completely clear.	4-6	
d) Current, good topic selection, and the purpose of research is not completely clear.	7-8	
2. The theoretical validity of the topic's examination and the quality of the literature's processing	0-12	9
a) Missing or weak theoretical background, lack of basic literature, the quality of processing (interpretation) is weak	0-4	
b) It is based on the basic literature / teaching material. The use of course materials has been demonstrated.	5-8	
c) It demonstrates knowledge of relevant national and international literature and technical standards, which is incorporated well into the work.	9-12	
3. Quality of the proposed problem and the research method's presentation	0-10	8
a) Missing or weak company description, system presentation, description of the method of research	0-3	
b) Presentation of the company, the IT problem and/or the method of research are incomplete, some parts are missing or inaccurate.	4-7	
c) Description and presentation of the proposed problem and the research method is complete and clear	8-10	
4. The quality of the presentation of possible solutions to the practical problem / utilization of the research method, depth of analysis	0-15	12
a) The problem is not properly perceived and/or the ambition of searching for possible solutions is missing.	0-4	
b) Basic methods, professional principles, known opinions and proposed solutions are followed mechanically.	5-9	
c) The Student is aware of the problem, the context, and assesses the possible solutions properly.	10-15	
5. The quality of the results obtained, conclusions and proposed solutions	0-15	11
a) The Thesis is a purely descriptive work, without any essential conclusions.	0-3	
b) The conclusions are only partly acceptable, justified and proven.	4-6	
c) Processing with analytical aspect, mostly good, but with not too recent conclusions, significant practical adaptations.	7-10	
d) Correct and independent conclusions, convincing and exploitable proposals	11-15	
6. Structure of the Thesis	0-10	8
a) Unstructured development, unclear, undue structure.	0-3	
b) Disproportionate, parts are not built on each other in logical order or the structure is over-dimensioned.	4-6	
c) Proportionate, logical structure with clear logical inference among parts, correct emphasis and development of essential points and contexts.	7-10	
7. Style, language (correct use of terminology), grammar (spelling)	0-8	7
a) Uneasy style, use of professional terminology is imprecise, a lot of spelling mistakes.	0-3	
b) The use of terminology is correct, but the style is uneasy, the language-style several times is not correct, exact.	4-6	
c) Exact, correct language-style, easy-to-understand way of thinking, consistent use of professional terminology, fluent, enjoyable description.	7-8	
8. Standard of formal requirements (external display of the thesis, quality of diagrams, tables, the appendix)	0-8	7
a) Negligent, non-aesthetic execution, unclear presentation.	0-3	
b) Careful editing, but it includes formally unclear, incorrect, inadequate annexes, charts, tables, texts.	4-6	

c) High-quality and aesthetic external presentation.	7-8	
9. Formal requirements for scientific bibliographic references	0-4	
a) Resources are not mentioned and/or there is no bibliography.	0	4
b) Missing/incomplete bibliographic data, inaccurate references.	1-3	
c) The scientific bibliographic references are appropriate to the standard.	4	
10. Overall impression of the Opponent (See 4-5 sentences justification at “Written evaluation” part)	0-10	7
Overall score*	0-100	80

** If the thesis gets 0 points in any of the categories above, it is unacceptable, so it has to be qualified with fail (1) grade.*

Recommended grade based on overall score:

0-50 Fail (1); 51-65 Pass (2); 66-75 Satisfactory (3); 76-85 Good (4); 86-100 Excellent (5).

Grade: **J6 (4)**

Written evaluation:

The aim of this work was to develop a JavaScript library that can perform optimization of multivariate functions in web browsers leveraging the GPU on the client-side. This goal has been partially achieved with the investigation of the Powell algorithm and the Adam optimizer, however, some algorithms are yet to be implemented.

The thesis shows the signs of some rush, on the other hand, it clearly shows its values as well. It already provides usable code that can be employed in a more complex environment in the minimization of organic molecules employing the force field methodology.

Pécs, 2022. 06. 16.

Opponent's signature

Degree Thesis defence: Igen

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