THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	INTEGRATING CONVERSATIONAL AI TO STREAMLINE SOFTWARE DEVELOPMENT WORKFLOWS
Author's name:	Daniil Palagin
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Information Technology (FIT)
Department:	Software Engineering
Thesis reviewer:	Doc. Mgr. Viliam Lisy, PhD.
Reviewer's department:	Computer Science, FEL

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

How demanding was the assigned project?

The student had to understand a wide range of technologies beyond standard bachelor's curriculum, as well as work processes in the KBSS research group.

Fulfilment of assignment **fulfilled with minor objections**

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.

The first three points of the assignment are fulfilled. The thesis demonstrates that the student reviewed the workflow at KBSS and automation opportunities in GitHub thoroughly. However, point 4 on testing is less developed. Just based on the text of the thesis, there is very little detail on how well the system actually worked. Reinterpreted summaries of the user's reactions are not very informative. I fortunately found the evaluation.pdf in the attachments, even though it was not referenced in the text. Based on this file, I consider point 4 to be satisfied as well.

Methodology **correct**

Comment on the correctness of the approach and/or the solution methods.

Some of the methodological decisions were present already in the assignment, but the use of docker, the selection of the programming language, LLMs, the technology used for semantic search were not included and I consider them correct. The methodology of testing could have been better elaborated and described in the text of the thesis.

Technical level **A - excellent.**

Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?

The description of the system in the text of the thesis is very high level and it is hard to assess from it the amount of work and sophistication of the system. However, the source code is well structured and documented and clearly shows the author's excellent technical knowledge. The work is rather broad, using a wide range of technologies. READMEs are thorough and address common problems. The code does not always include comments, but it is well readable anyway.

Formal and language level, scope of thesis **A - excellent.**

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?

The text is well structured and I have not noticed any typographic or grammar mistakes. It is complemented by helpful schemas and some examples. However, they could have been in vector graphics or at least a higher resolution (e.g., Fig. 4.2). The language is clear and understandable and the length of the thesis is appropriate. I would have preferred less code snippets (since the code is provided) and more analysis of the reasoning behind design decisions.

Selection of sources, citation correctness **C - 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?
The review of the existing solutions is limited to the GitHub ecosystem. I believe it would be helpful to make a broader review of similar systems and more general literature on using LLM assistants in maintaining codebases. The used literature is limited to online documentation and blog posts, even in areas, such as chunking and vector databases, where proper research papers exist. Still, the resources used are of sufficient quality and the citations are correct.

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

The student did a lot of work on a real-world task. He used a wide range of modern technologies and produced a working and complete product. Testing has shown some imperfections, and the review of similar systems and related technologies might have been more thorough, but overall the text is very clear and extensive. All the requirements of the assignment have been satisfied and the student clearly demonstrated his ability to independently perform non-trivial technical work.

The grade that I award for the thesis is A - excellent.

Questions:

1. **Have you reviewed other projects providing similar functionality, besides GitHub copilot?**
2. **How/why did you choose the particular vector database and embeddings used in the project?**

Date: 9.6.2025

Signature: