

Master Thesis Supervisor's Expert Opinion

Student: Emmanuel Amponsem
 Student Number: E23963
 Title of Master Thesis: Assessing Vegetation Change using Satellite Imagery Analysis
 Aim of the Thesis: This thesis aims to compare selected satellite vegetation delineation and change detection methods and use the chosen methods to assess vegetation change in recent years in a selected area of interest.
 Thesis Supervisor: Ing. Tomáš Brunclík, Ph.D.
 Study Programme: Informatics and System Engineering
 Academic Year: 2024/25

Difficulty of the Topic

	Excellent	Very good	Satisfactory	Unsatisfactory	Cannot be evaluated
Theoretical knowledge	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Input data and their processing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Methods used	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thesis Evaluation Criteria

	Excellent	Very good	Satisfactory	Unsatisfactory	Cannot be evaluated
Degree of achievement of the aim of the thesis	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Original attitude to the topic processing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequacy of the methods used	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Depth of analysis (relative to topic)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logical structure of the thesis and scope	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Working with Czech and foreign literature including citations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal arrangement of the thesis (text, charts, tables)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language level (style, grammar, terminology)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Most recently printed on December 22.05.2025 08:07:00

Applicability of the Results of the Thesis

	High	Medium	Low	Cannot be evaluated
For theory	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For practice	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other Comments on the Thesis

The author demonstrated his capability to independently utilize Google Earth Engine (GEE) for processing remote sensing data related to vegetation monitoring. He chose suitable, albeit basic, methods for the task and met the assignment's requirements.

However, his progress was inconsistent, leading to time pressures that affected the thesis completion. The methods used could benefit from refinement, and testing more advanced techniques, such as different satellite data pre-processing or classification approaches. The student compared Level-1C and Level-2A vegetation indices for the lack of Level-2A data for one of the periods in GEE, but this may have introduced bias. Time pressures also resulted in formal errors, particularly in the confusion matrices in tables 7-9, although these are correctly presented in the appendices from the GEE code.

On the other hand, the presented use of GEE can serve as a valuable example for future remote sensing works.

Comments on the Outputs from the Theses System

The submitted work is not a plagiarism. The highest degree of similarity: 1 %. Number of similar documents: 2. The similarity was found mostly in the parts before Introduction, containing standard phrases used in different theses or in titles of chapters.

Questions and Suggestions for Defence

How could the problem with the available levels of processing have been rectified? Which of the two indices should be more robust against the potential bias introduced by this, and why?

Final Evaluation

I **recommend** the thesis for the defence.

I propose to grade this Master thesis as follows: **E**

In Pardubice 21.5.2025

Signature