CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Environmental Sciences

BACHELOR THESIS ASSIGNMENT

Alexei Holomonov

Environmental Data Science
Informatics

Thesis title

The development of semi-automatic spatial data collection instrument

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Objectives of thesis

The primary goal of the thesis is to create and integrate digital solutions into the process of landscape design. The digital platform being developed is meant to support property owners and landscape designers in planning their spaces, by gathering initial data and enabling the addition of various elements to the map. Utilizing this tool should present a more intuitive approach to designing the landscape and should not necessitate extensive knowledge or specific skills.

Methodology

To accomplish the aforementioned goals, the tool must be user-centric and equipped with various integrated or attachable sensors. Additionally, it should encompass semi-automated functionalities for initial map processing, and offer mobility to enhance the natural flow of data collection and landscape planning. The visual representations produced should also be exportable for physical printing or use in other post-processing software applications.

According to the 'Dean's Regulation No. 01/2020 – Methodological Guidelines for writing Bachelor Thesis at the Faculty of Environmental Sciences', the thesis will be of type 'Development of author's software and information systems, advanced data analyses'.

The proposed extent of the thesis

20 pages

Keywords

spatial data; data collection; landscape planning

Recommended information sources

Crockford, Douglas. JavaScript: The Good Parts: The Good Parts. " O'Reilly Media, Inc.", 2008.
Duckett, Jon. HTML & CSS: design and build websites. Vol. 15. Indianapolis, IN, USA:: Wiley, 2011.

Expected date of thesis defence

2023/24 SS – FES

The Bachelor Thesis Supervisor

Ing. Filip Strnad, Ph.D.

Supervising department

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Electronic approval: 16. 3. 2024

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Electronic approval: 19. 3. 2024

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Dean

Prague on 28. 03. 2024