EÖTVÖS LORÁND UNIVERSITY

FACULTY OF INFORMATICS

Thesis Registration Form

Student's Data:

Student's Name: Mykyev Atabek

Student's Neptun code: FYQWAV

Course Data:

Student's Major: Computer Science BSc

I have an internal supervisor

Internal Supervisor's Name: *Maloschikné Harrach Nóra*

Supervisor's Home Institution: ***Department of Algorithms and Applications***

Address of Supervisor's Home Institution: ***1117, Budapest, Pázmány Péter sétány 1/C.***

Supervisor's Position and Degree: *Assistant professor, PhD in Mathematics*

Thesis Title: Visualization of the path-finding algorithms on graphs.

Topic of the Thesis:

(Upon consulting with your supervisor, give a 150-300-word-long synopsis os your planned thesis.)

In this thesis, the primary objective is to provide a comprehensive understanding of how diverse path-finding algorithms operate on graphs, unraveling the details of each step in their execution.

The purpose of this project extends beyond mere algorithmic exploration - it serves as an educational tool. Through detailed visualizations, the thesis aims to show the inner workings of various path-finding algorithms. Each algorithm is dissected, and its functionality is expounded upon, fostering a nuanced comprehension of the algorithmic processes involved.

Furthermore, the research extends to recommending optimal algorithms such fit to specific graph characteristics. These suggestions are not arbitrary but are grounded in a diligent analysis of factors such as graph type, density, and other pertinent algorithm-related considerations. By offering nuanced insights into algorithm selection, the thesis aims to empower users to make informed decisions based on the unique attributes of their graphs.

In essence, this thesis strives to be a comprehensive resource, shedding light on the dynamic interplay between path-finding algorithms and graphs while simultaneously serving as an instructive guide for those navigating the complicated landscape of algorithmic decision-making.

Budapest, 2023. 11. 30.