Epidemiological models - macro level model
Modelling and Simulation

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Contents

1 Introduction

The aim of this project is to implement epidemiological model of COVID-19[1] and simulate it flow using SIMLIB framework[2]. Used model contains different scenarios of quarantine precautions (using different types of lockdown). Based on simulations of this scenarios, influence of particular scenario is shown. As an experiment, theoretical scenarios form the article **[[TODO Should we write this?]]** and current lockdown type in Czech Republic are analyzed.

[[TODO We want to prove or not prove efficiency of lockdowns]]

1.1 Contributors

This project is solved by team of two students: Abramov Mikhail and Pavel Yadlouski.

1.2 Model validation

Results of theoretical scenarios simulation are compared with reference results from the article. Experiment with lockdown type in Czech Republic is compared with public

From documentation requirements

[[TODO kapitola 1.2: V jakém prostředí a za jakých podmínek probíhalo experimentální ověřování validity modelu – pokud čtenář/zadavatel vaší zprávy neuvěří ve validitu vašeho modelu, obvykle vaši práci odmítne už v tomto okamžiku.]]

2 Sources

Article with the mathematical model [1] for implementation is found in VUT online library [2]

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[1]https://en.wikipedia.org/wiki/Coronavirus_disease_2019

[2]https://www-sciencedirect-com.ezproxy.lib.vutbr.cz

3 Model

4 Implementation

5 Experiment

[[TODO Misha napishy suda]]

6 Conclusion

**[[TODO Co se naucili]] [[TODO Doporuceni]]
[[TODO Experiment with other country]]**

References

[1] D. Ibarra-Vega. Lockdown, one, two, none, or smart. modeling containing covid-19 infection. a conceptual model. *Science of The Total Environment*, 730:138917, 2020.

[2] P. Peringer, D. Leska, and D. Martinek. Simlib/c++ (simulation library for c++). [online], 19.10.2018. [vid. 2020-12].