

Thesis topic
“Spatiotemporal modeling of accidents and the
Estonian rescue board response times”

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The Estonian Rescue Board is dealing with various accidents both social and environmental that happen on the Estonian territory. Their goal is to prevent accidents, save lives and property, keep environment safe. Moreover, their strategic plan is to reduce the statistics of accidents by improving in numerous aspects. Planning of the rescue car divisions, creating an effective network of volunteers, reduce response times are just a few to name.

In order to meet the set goals, the Estonian rescue board has collected data regarding various aspects of its work routine. The dataset has many different challenges; a dedicated student who choses to work on this topic has an opportunity to help the Rescue board via the data analysis. Moreover, the suggested topic can be adjusted and changed according to the student preferences. The Estonian Rescue Board is willing to help and consult the student on a regular basis together with a supervisor from University of Tartu.

One of the suggested topics is “Spatiotemporal modeling of accidents and the Estonian rescue board response times”. The goal is to look at accidents, events and/or other factors in time and by geographical location and compare the response times of the Rescue board. Some of the questions are:

- are there locations, where the event under investigation has some seasonal/periodic patterns?
- are there locations, where the response times depend on a period (time of a day/season)?
- what is the factors that are strongly associated with the response times
- how the spatiotemporal data can be effectively visualized so that it can be used by the Estonian rescue board

More information about the strategic goals from the Rescue Board can be found here: <http://www.paasteamet.ee/dotAsset/0e0aa3b2-c02a-4f1f-a838-f73d184c4156.pdf>