

# Simulating Trajectories by Route-Planning Algorithms

Tamás Kádek<sup>a</sup>, Dávid Nagy<sup>b</sup>

<sup>a</sup>University of Debrecen  
kadek.tamas@inf.unideb.hu

<sup>b</sup>University of Debrecen  
nagy.david@inf.unideb.hu

## Abstract

A new era has begun in the field of automobile manufacturing as the automobiles get smarter and smarter every day. The development of self-driving cars and the advancement of smart city applications require more and more real-world data. These data can be used as an input for learning algorithms or simulations of real-world environment. One special domain, which became very popular nowadays, is the traffic management. Data providers can be devices with GPS sensors or GSM communication capabilities.

Sometimes, it is extremely difficult to obtain the necessary amount of information about traffic trajectories. In several cases, the data owners are not interested in sharing their knowledge in order to keep their marketing advantage. A possible solution might be to simulate them. In this work, the authors try to discover the possibility of using some well-known route planning algorithms which are sensible to the current state of traffic. The main goal of this article is to give a short overview of some solutions which can be achieved by using these softwares and summarize their benefits and drawbacks.

*Keywords:* Smart City, Trajectory simulations, Route Planning