

ABSTRACT

Aspects concern a computer-implemented method for predicting traffic parameters on a road network comprising the steps of: loading a spatial data file associated with the road network and a corresponding network profile associated with the road network; converting the spatial data file to an edge-based graph comprising a plurality of nodes and edges, each node representing a respective road segment of the road network and each edge representing a respective physical location; extracting a plurality of road attributes associated with the road network and deriving corresponding node features based on the plurality of road attributes; inputting the edge-based graph, node features and network profile into a machine learning algorithm for predicting network parameters on each respective road segment; wherein the machine learning algorithm is configured to output a set of traffic parameters corresponding to each of the plurality of nodes.

FIG. 1