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# Application of Artificial Intelligence for Traffic Data Analysis, Simulations and Adaptation

**Publisher:** IEEE[Cite This](#)[PDF](#)Daniela Koltovska Nechocka ; Renata Petrevska Nechkoska ; Renata Duma [All Authors](#)**94**  
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#### Abstract:

The application of Artificial Intelligence (AI) in traffic management and control is aimed at overcoming the challenges of increased travel demand, safety concerns, noise reduction, congestion, and environmental effects. This paper gives an overview of the current status, trends, and challenges in applying AI to address transportation problems and initial insights from a managerial perspective in terms of adaptation. The automated traffic data collected by the Good Vision AI-based cloud tool are used to perform an analysis of traffic flows.

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### I. Introduction

Nowadays, there is no longer any doubt that Artificial Intelligence (AI) development can provide unprecedented opportunities to enhance the performance of different industries and businesses, as well as including the transport sector. Transportation problems become challenges when the systems and the user's behavior are too difficult to model and predict travel patterns. By sharing the characteristics of applicability in real-time and adaptation, the capability of self-analyzing by errors and success, learning and improvement (over time) interacting with the environment, and quick learning from a large amount of data, AI is deemed to be a good fit to overcome the challenges of increasing travel demand, traffic congestion, safety concerns, and environmental degradation [1]. These challenges arise from the steady traffic growth due to the increasing population in urban areas, especially in developing countries [2].

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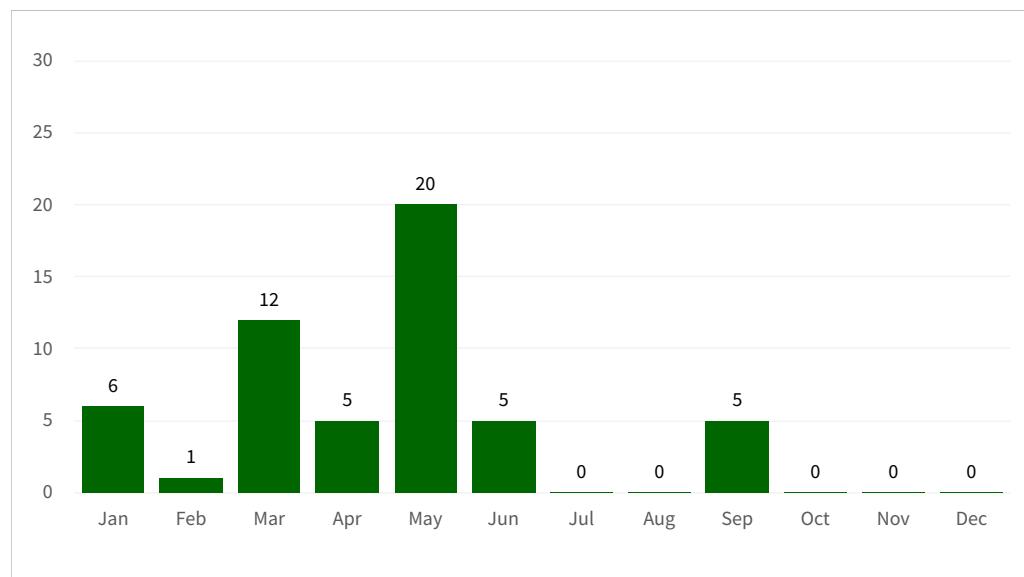
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