Neural traffic sign recognition for autonomous vehicles
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Abstract:
A vision-based vehicle guidance system working in road environments has three main roles: road detection, sign recognition, and obstacles detection. Traffic signs provide very valuable information about the road in order to provide safer and easy driving environment. Traffic signs are designed to be easily recognized by human drivers mainly because their colors and shapes are very different from natural environments. The algorithm presented in this paper makes the best use of these features. The algorithm has two main parts: 1) for detection using the colors and shapes of the signs; and 2) for classification using a neural network.