

Classification of road signs has been studied for many years and very promising results have been achieved. We present the analysis of used data sets as very limited for real case classification. In this thesis we analyse publicly available data sets and by merging and extending them, we create a wider and more comprehensive data set applicable in the Czech Republic. Finally, we propose a new convolutional neural network architecture and test it along with several preprocessing techniques on the new data set reaching accuracy of over 99%.