AALBORG UNIVERSITY

STUDENT REPORT

Title:
Speed Sign Recognizer

Project Period:
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Project Group:
SW502E18

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Abstract:

In Denmark, more than 1700 people were seriously injured, while 175 died in road accidents in 2017 where speed was a decisive factor in the severity of the accident.
Car manufacturers are investing extensively in the development of autonomous systems that can increase the safety on the road.
The purpose of this report is to explore one of these applications, namely a car that is capable of detecting and recognizing speed signs and respond by maintaining a speed below the speed limit.
Much effort was used on normalization that extracted speed signs in a picture and transformed them to perfectly circular, black-and-white input, which is given as input to a neural network.
The neural network obtains an average of 68 % accuracy in recognition of the speed signs 20, 30, 50, 60, 70, 80.
This study confirmed the importance of normalization as well as the configuration of the neural network.