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## Steel surface defect detection using convolutional neural network

## Yousra kateb

University of m'hamed Bougarra Boumerdes, Algeria

## Abstract

Steel surface inspection has seen an enormous attention in relation with industrial quality of products. Steel defect inspection had been studied in several methods supported image classification within the most of your time, but these can detect only such quite defects in very limited conditions like illumination, obvious contours, contrast and noise...etc. during this paper, we'll discuss the automated detection of steel surface defects using the convolutional neural network, which may classify the leads to their specific classes. The steel we are getting to use are going to be well-classified weather the conditions of imaging aren't an equivalent, and this is often the advantage of CNN in our work. The accuracy and therefore the robustness of the results are so satisfying. Steel is far and away the foremost important, multi-functional and most adaptable of materials. The event of humankind would are impossible except for steel. The backbone of developed economies was laid on the strength and inherent uses of steel.

In addition, as compared with other materials of its type have low production costs. The energy required for extracting iron from ore is about 25 you look after what's needed for extracting aluminum. Steel is environment friendly because it is often recycled. 5.6 % of element iron is present in crust, representing a secure staple base. Production is 20 times higher as compared to production of all non-ferrous metals put together.

The aim of this work is to detect the faults which will present in industrial steel. We selected a pretrained network and a convolutional neural network to enhance the detection accuracy. We got very satisfying results at the top of the experimentation part.

## Biography

Yousra kateb was worked in Automation and Control in Petrochemical Industries; University M'hamed Bougara of Boumerdes, Algeria.



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