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# Rotate and Evaluate: Convolution only protects the translate invariant.

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## Abstract

Recent developments in image processing has a potive impact on industry including manufacturing, automation, and medical imaging. However, there are also many issues when applying these image processing methods. One property often taken for granted when applying these methods is that convolution models are *translation invariant*, geometrically meaning that any sliding of a region gives the same output.

## 1 Translation and Rotational Invariance