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# Research Report: KMSKB

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# Overview

- Object detection via Deep Learning

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# Deep Learning

- Deep Learning needs a lot of annotated data to train in object detection.
- We don't have a lot of annotated digitized artworks

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# Annotated data

How can we get more?

- Manually annotating data (very time consuming)
- Augmenting datasets

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# Augmenting datasets

Augmenting datasets with  
artistic style

- Style transfer method
- “Multiply” annotated images with artistic styles

# Visual

Example of data augmentation  
with style transfer



(a) Paderborn cathedral



(b) The starry night



(c) The scream



(d) The shipwreck of  
the minotaur



(e) Cathedral  
style in (b)



(f) Cathedral  
style in (c)



(g) Cathedral  
with  
style in (d)