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Quality improvement in radiology reporting by imaging informatics and machine learning

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Quality Improvement in Radiology Reporting by Imaging Informatics and Machine Learning

Allard Olthof

Cover picture:

The cover picture is created by a neural network method called style transfer. The content is retrieved from the brain MRI image, the style is captured from the sunflower image. MRI symbolizes the advanced technologies within radiology. The brain illustrates both the fascinating human anatomy as well as the reasoning inherent to performing research.

Sunflowers have spirals of florets in clockwise and counter-clockwise directions in the amount of adjacent Fibonacci numbers. It symbolizes the ability of math to describe patterns in nature. Math is the basis of artificial intelligence and is essential in the development of data-driven healthcare. The sunflower also symbolizes light, warmth, and loyalty and has a special meaning for this thesis's author.

In this thesis, the author strives to improve healthcare quality by integrating different domains and using artificial intelligence, as symbolized by the applied style transfer neural network.

Allard Olthof

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PhD thesis, University of Groningen

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