Automated segmentation of the human spine on CT images from point-level labels.

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Contents

Acronyms

A

AI Artificial Intelligence. 4

C

CNN Convolutional Neural Network. 4, 5

CRF Conditional Random Field. 4

CT Computer Tomography. 4

M

MIL Multi-Instance Learning. 4

ML Machine Learning. 4

R

RNN Recurrent Neural Network. 4

Glossary

C

Co-segmentation

Moet ik nog opzoeken. 4

D

Decoder

features back to image. 4

E

Encoder

feature extractor. 4

O

Objectness score

Is it an object?. 4

S

Supervised Learning

Machine Learning task where full target lables are present. 4

T

Tomography

Beelden. 4

U

Unsupervised Learning

Moet ik nog opzoeken. 4

W

Weakly Supervised Learning

Moet ik nog opzoeken. 4

Chapter 1

Background

1.1 Problem description

Short intro about minimally invasive (back) surgery

Convolutional Neural Network (CNN)

1.2 Medical imaging

Part about the technology to generate the data: CT and MRI.

1.3 Artificial intelligence for medicine

Short intro: what is AI and how can it be used in medicine.

Reference	Title	Author	Objective	Techniques
[**DasCLuciaMS2017**]	bla	bla2	bla	bla

1.4 Methodology

1.5 Data used

source fo the data used: [1]

Appendix A

Additional

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Bibliography

[1] Brian Nett et al. “Tomosynthesis via total variation minimization reconstruction and prior image constrained compressed sensing ({PICCS}) on a C-arm system”. In: *Medical Imaging 2008: Physics of Medical Imaging*. Ed. by Jiang Hsieh and Ehsan Samei. SPIE, 2008. DOI: 10.1117/12.771294. URL: https://doi.org/10.1117/12.771294.