

Pixelweise Klassifikation von Straße

Martin, Marvin, Sebastian, Vitali | 17. Juni 2015



Contents

1 Worum es geht

2 Paper

3 Lessons learned

4 Ergebnisse

5 Ausblick

Daten



Worum es geht

●○○

Paper

○○○○

Lessons learned

○○

Ergebnisse

○○○○○○

Ausblick

○

End

○○

Overlay



Worum es geht

● ● ○

Paper

○ ○ ○

Lessons learned

○ ○

Ergebnisse

○ ○ ○ ○ ○ ○

Ausblick

○

End

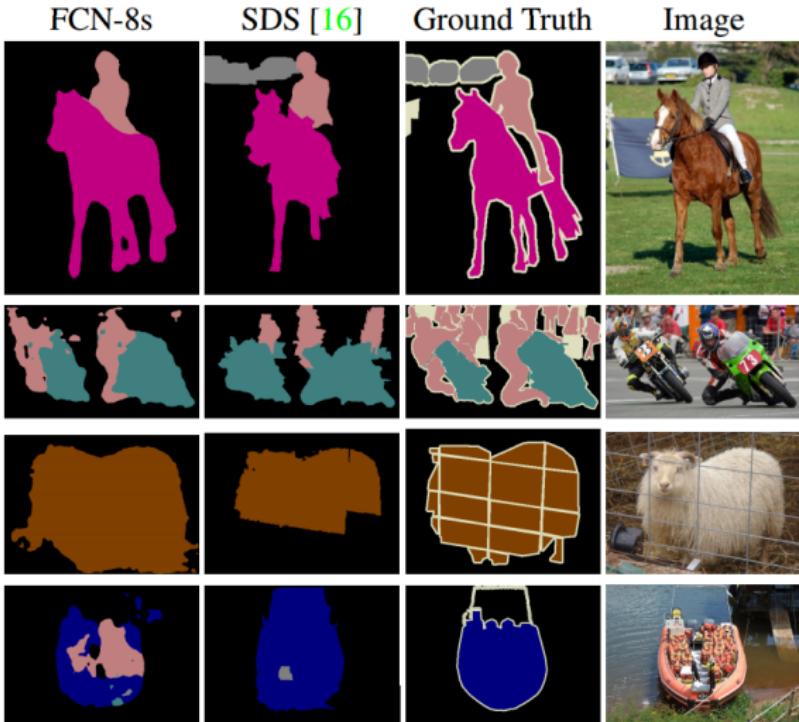
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Frameworks

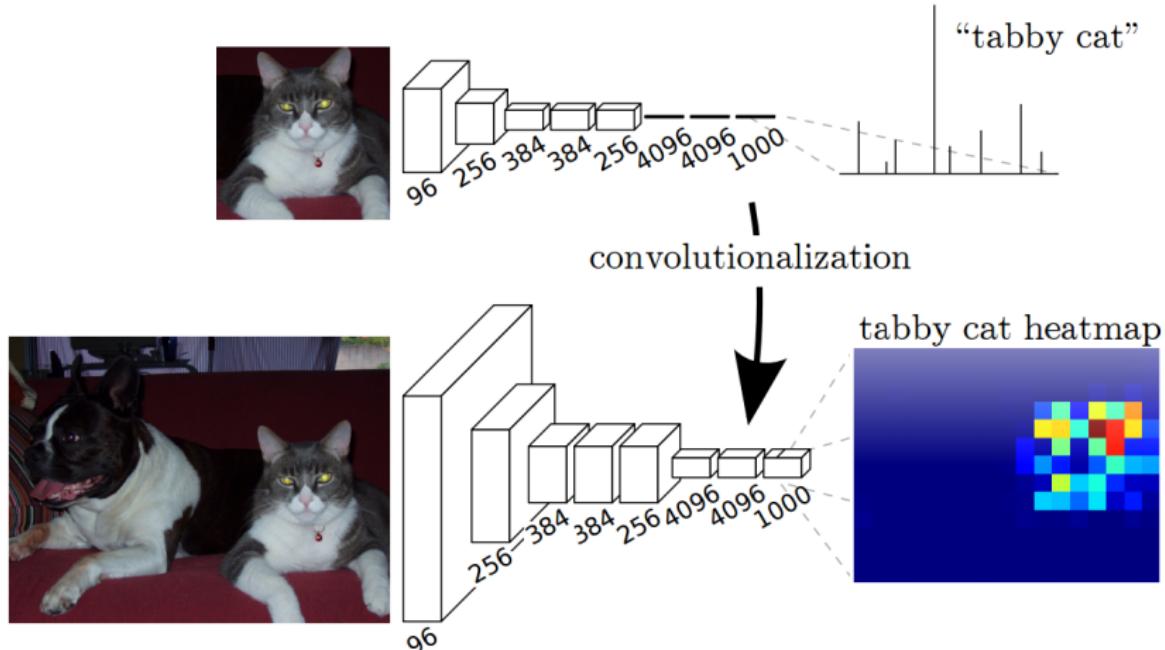
- Caffe - caffe.berkeleyvision.org
- ⇒ SST - Street Segmentation Toolkit
- nolearn - github.com/dnouri/nolearn
- Lasagne - github.com/Lasagne/Lasagne
- Theano - <https://github.com/Theano/Theano>
- nvidia CUDA

- Fully Convolutional Networks for Semantic Segmentation:
Jonathan Long, Evan Shelhamer, Trevor Darrell
- pixelwise segmentation of multiple classes

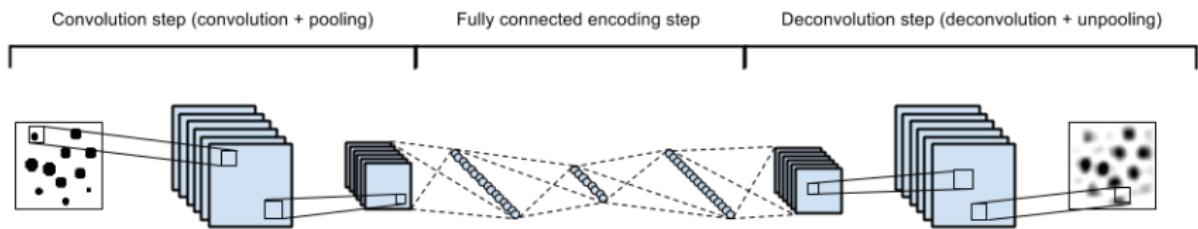
Paper - Results



Paper - Heatmap



Paper - Deconvolution



- Classification - Sliding Window
- Regression - Fully - Patch Evaluation

Classifikation - Sliding Window

How this works.

Regression - Fully - Patch Evaluation

How that works.

Net Topologies

How the Nets look like.

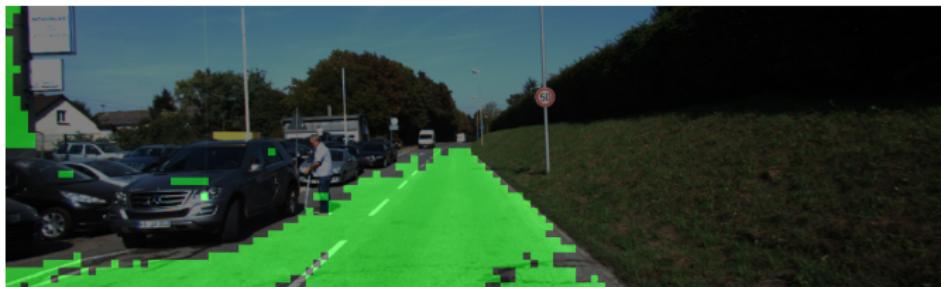
Ergebnisse-Convolutional Layer



Ergebnisse-Convolutional Layer



Vergleich



Worum es geht
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Paper
○○○○

Lessons learned
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Ergebnisse
○○●○○○

Ausblick
○

End
○○

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16/20

Vergleich

False Positive Negative

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Paper
oooo

Lessons learned
oo

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Ergebnisse
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Ausblick
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End
oo

17. Juni 2015

17/20

False Positive Negative

Video

Worum es geht
○○○

Paper
○○○○

Lessons learned
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Ergebnisse
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Ausblick
○

End
○○

17. Juni 2015

19/20

Ausblick

- wegen zu wenig ram keine grösseren Patches
- Neuronales Netz verbessern
- effizienteres Zusammensetzen der Patches

Image Sources

- Paper - Results and Heatmap by Jonathan Long, Evan Shelhamer, Trevor Darrell
- Paper - Deconvolution by Mike Swarbrick Jones

Thanks for Your Attention!



Worum es geht
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Paper
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Lessons learned
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Ergebnisse
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Ausblick
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End
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