

Form and Content in Neural Networks

Alejandro Avilés

June 11, 2016

Version: My First Draft



University of Granada

Higher Technical School of Information and Telecommunication Engineering
Department of Computer Science and Artificial Intelligence
Master in Soft Computing and Intelligent Systems

Unconventional Applications of Deep Learning

Form and Content in Neural Networks

Alejandro Avilés

Research project supervised by
Fernando Berzal

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18014, Granada (Spain)

Abstract

Update with final abstract

The work aims to review unconventional applications of Deep Learning, focusing on separation of style and content of images in Neural Networks as research is starting to pay attention to this task. First, to have an appropriate context for the discussion, the work will give an introduction to common terms, techniques and recent breakthroughs in the field of Deep Learning at large and image recognition in particular. From then on it will present how Neural Networks have been altered and reused for purposes different from what they were initially designed for.

Abstract (Spanish)

Translate final abstract to Spanish

Acknowledgement

Something emotive

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Introduction

“ You can’t do better design with a computer, but
you can speed up your work enormously.

— **Wim Crouwel**

(Graphic designer and typographer)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1.1 Postcards: My Address

Ricardo Langner

Alfred-Schrapel-Str. 7

01307 Dresden

Germany

1.2 Motivation and Problem Statement

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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in of the original language. There is no need for special content, but the length of words should match the language.

[Jür00; Jür95; Mie11a; KJUM11; App10a; App10b; App10c]

1.3 Results

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1.3.1 Some References

[@Fre10; @Mie11b]

1.4 Thesis Structure

Chapter 2

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Chapter 3

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Chapter 4

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Related Work

“ *A picture is worth a thousand words. An interface is worth a thousand pictures.*

— **Ben Shneiderman**
(Professor for Computer Science)

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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2.1 Related Work Section 1

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2.3 Related Work Section 3

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2.4 Conclusion

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System

” *Innovation distinguishes between a leader and a follower.*

— **Steve Jobs**
(CEO Apple Inc.)

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3.1 System Section 1

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Fig. 3.1: Figure example: (a) example part one, (c) example part two; (c) example part three

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

3.2 System Section 2

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information

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Fig. 3.2: Another Figure example: (a) example part one, (c) example part two; (c) example part three

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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3.3 System Section 3

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Concepts: This text is here to test a very long title, to simulate the line break behavior, to show that an extremely long title also works

“Users do not care about what is inside the box, as long as the box does what they need done.

— **Jef Raskin**

about Human Computer Interfaces

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5.3 Future Work

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Colophon

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Declaration

You can put your declaration here, to declare that you have completed your work solely and only with the help of the references you mentioned.

Granada, June 11, 2016

Alejandro Avilés

