SerialExperimentsOlga

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Bachelor's Thesis

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Abstract

Abstract (different language)

Acknowledgement

Contents

x

Introduction 1

A graph $\mathcal{G} = (V, E)$ is a structure of vertices and edges.

Let X_v denote the node feature vector for $v \in V$.

$y_v \to$ associated label to node $v \in V$
$h_v \to$ representation vector of $v \in V$

$\{G_1, ..., G_N\} \subset \mathcal{G} \to$ set of graphs
$\{y_1, ..., y_N\} \subset \mathcal{Y} \to$ set of labels

$h_G \to$ representation vector $y_G = \mathrm{g}(h_G)$ predicted label of an entire graph

graph convolutional network (GCN)
GCN

$K \to K$-th layer of a GNN (K-th iteration)
$a_v^{(l)}$

$(A^{-1})^T$

$(A^{-1})^T$

This is how we cite
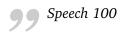[Has+20]

1.0.1 DropOut

[Sri+14]

Dropout randomly removes output elements of it's previous hidden layer $H^{(l)}$ based on independant bernoulli random draws with a constant sucess rate at each training iteration.

This can be formulated as follows: $H^{(l+1)} = \sigma(\mathfrak{N}(A)(Z^{(l)} \odot H^{(l)}))$

Where $Z^{(l)}$ is

Related Work

<div style="text-align: right">2</div>

> *Speech 100*

— **Olga Yakobson**
(Ph.Neutral)

2.1 Related Work Section 1

2.2 Related Work Section 2

2.3 Related Work Section 3

2.4 Conclusion

System 3

> ❞ *I would start with related work*
>
> — **C.Damke**
> (PhD)

3.1 System Section 1

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

3.2 System Section 2

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

3.3 System Section 3

3.4 Conclusion

4

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

5 Conclusion

5.1 System Section 1

5.2 System Section 2

5.3 Future Work

6 Intro

This is a test chapter $\frac{abc}{xyz}$

This is out of line

$$\frac{abc}{xyz}$$

$$\sum \frac{abc}{xyz} \tag{6.1}$$
$$\frac{abc}{xyz}$$
$$\frac{abc}{xyz} \tag{6.2}$$

$$\sum \frac{abc}{xyz}$$
$$\frac{abc}{xyz}$$
$$\frac{abc}{xyz}$$

6.1 Theoretcal Foundations

This is a section section 6.1 Section 6.1This is another section

GCN GCN

Example Appendix

A

A.1 Appendix Section 1

Alpha	Beta	Gamma
0	1	2
3	4	5

Tab. A.1.: This is a caption text.

A.2 Appendix Section 2

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.

Alpha	Beta	Gamma
0	1	2
3	4	5

Tab. A.2.: This is a caption text.

Bibliography

[Has+20]   Arman Hasanzadeh, Ehsan Hajiramezanali, Shahin Boluki, et al. "Bayesian Graph Neural Networks with Adaptive Connection Sampling". In: *CoRR* abs/2006.04064 (2020). arXiv: 2006.04064 (cit. on p. 1).

[Sri+14]   Nitish Srivastava, Geoffrey E. Hinton, Alex Krizhevsky, Ilya Sutskever, and Ruslan Salakhutdinov. "Dropout: a simple way to prevent neural networks from overfitting". In: *J. Mach. Learn. Res.* 15.1 (2014), pp. 1929–1958 (cit. on p. 1).

List of Figures

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Colophon

This thesis was typeset with $\text{\LaTeX}\,2_\varepsilon$. It uses the *Clean Thesis* style developed by Ricardo Langner. The design of the *Clean Thesis* style is inspired by user guide documents from Apple Inc.

Download the *Clean Thesis* style at `http://cleanthesis.der-ric.de/`.

Declaration

Ich, Olga Yakobson (Matrikel-Nr. 11591478), versichere, dass ich die Masterarbeit mit dem Thema SerialExperimentsOlga selbstständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe. Die Stellen der Arbeit, die ich anderen Werken dem Wortlaut oder dem Sinn nach entnommen habe, wurden in jedem Fall unter Angabe der Quellen der Entlehnung kenntlich gemacht. Das Gleiche gilt auch für Tabellen, Skizzen, Zeichnungen, bildliche Darstellungen usw. Die Bachelorarbeit habe ich nicht, auch nicht auszugsweise, für eine andere abgeschlossene Prüfung angefertigt. Auf § 63 Abs. 5 HZG wird hingewiesen. München, 1. Februar 2023

Munich, February 4, 2022

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Olga Yakobson