

# Washington Cunha, Ph.D. Student

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## Research Interest

Washington Cunha    I'm a Ph.D. Student in the Machine Learning and Databases Laboratory (LBD), advised by teacher Marcos Goncalves at Federal University of Minas Gerais. I'm working on Deep Learning Text Classification (ATC) and Sentiment Analysis (SA) models. More specifically, my main research goal is to study instance selection approaches in order to reduce the cost (time consumption) of deep learning ATC and SA models while keeping the effectiveness.

## Education

- 2019 – Actual    **Ph.D. Student**, Federal University of Minas Gerais.  
Project Title: *On the Role of Instance Selection Methods for Text Classification*
- 2018 – 2019    **Master Degree in Computer Science** in Federal University of Minas Gerais  
Thesis title: *Extended pre-processing pipeline for text classification: On the role of meta-feature representations, sparsification and selective sampling.*
- 2014 – 2017    **Bachelor Degree in Computer Science** in Federal University of São João del-Rei.  
Thesis title: *A Feature-oriented Sentiment Rating for Mobile App Reviews.*

## Research Publications

### Journal Articles

- 1 On the cost-effectiveness of neural and non-neural approaches and representations for text classification. (2021). *IPeM – Imp. Fac.*: 6.222. doi:10.1016/j.ipm.2020.102481
- 2 Stroke outcome measurements from electronic medical records: Cross-sectional study on the effectiveness of neural and nonneural classifiers. (2021). *JMIR Med Inform.* doi:10.2196/29120
- 3 Extended pre-processing pipeline for text classification: On the role of meta-feature representations, sparsification and selective sampling. (2020). *IPeM.* doi:10.1016/j.ipm.2020.102263

### Conference Proceedings

- 1 CluHTM - Semantic Hierarchical Topic Modeling based on CluWords. (2020), In *ACL'20 – h5-index: 135.* doi:10.18653/v1/2020.acl-main.724
- 2 “Keep It Simple, Lazy” – MetaLazy: A New MetaStrategy for Lazy Text Classification. (2020), In *CIKM'20 – h5-index: 59.* doi:10.1145/3340531.3412180
- 3 CluWords: Exploiting Semantic Word Clustering Representation for Enhanced Topic Modeling. (2019), In *WSDM'19 – h5-index: 61.* doi:10.1145/3289600.3291032
- 4 A Feature-oriented Sentiment Rating for Mobile App Reviews. (2018), In *The world wide web conference WWW'18 – h5-index: 90.* doi:10.1145/3178876.3186168
- 5 Semantically-Enhanced Topic Modeling. (2018), In *CIKM'18 – h5-index: 59.* doi:10.1145/3269206.3271797

## Skills

Coding	Python, C, C++, CUDA, R, AWK, Shellscript, $\LaTeX$ , PowerBi, Tableau
Research	Machine Learning and Data Mining, focusing in Automatic Text Classification, Feature Engineering, Sentiment Analysis and Topic Modeling.
Libraries	<b>Python:</b> Scikit-learn, Numpy, Pandas, Pytorch, Keras, Scipy, Mxnet, Matplotlib, Seaborn.
Dev	AWS, Linux, Git, Docker, Jupyter-notebook, Google Colab.
Languages	Portuguese and English.
Misc.	Academic research, teaching, training, consultation, $\LaTeX$ typesetting and publishing.

## Miscellaneous Experience

### Awards and Achievements

2021	<b>Honorable Mention</b> in the Masters Theses Contest of the Brazilian Database Symposium. <b>CTDBD – SBBD’21</b>
2019	<b>Among of 10 best Brazilian Scientific Initiations</b> Research selected by Brazilian Computer Society (As co-advisor). <b>CTIC’19 – SBC.</b>

### Advanced Courses

2020	Natural Language Processing - Deep Learning Algorithms
2019	Deep Learning Algorithms
	Information Theory
2018	Information Retrieval and Social Computing
	Quantitative Methods of Experimental Research in Computer Science
	Machine Learning
	Fundamentals of Statistics for Data Science

### Certification

2020	Coursera Specialization: Deep Learning - Coursera
	Coursera Specialization: Applied Data Science with Python - Coursera
	Coursera Specialization: AWS Fundamentals - Coursera
	Practical Project Management - Udemy
2019	Fundamentals of Accelerated Computing with CUDA C/C++ - NVIDIA

## Academic Service

2021	Association for Computational Linguistics ( <b>ACL</b> ) - Reviewer
	The Conference on Empirical Methods in Natural Language Processing ( <b>EMNLP</b> ) - Reviewer
	The Conference on Information and Knowledge Management ( <b>CIKM</b> ) - Sub-Reviewer
	The European Conference on Information Retrieval ( <b>ECIR</b> ) - Sub-Reviewer
	Association for Computational Linguistics ( <b>ACL</b> ) Mentorship - Participant
	WebMedia Conference - Volunteer - Squad Leader
	ACM and SBC Membership