

André dos Santos

POSTDOC RESEARCHER · INDUSTRIAL ENGINEER · PROFESSOR

☎ +1 (306) 570 - 1413 | ✉ dossantos@ualberta.ca | 🏠 <https://andreeds.github.io/>

Experience

Computing Science Department - University of Alberta

Edmonton, Canada

POSTDOCTORAL RESEARCHER

Synthetic Data & Explainability

Spring 2020 - Present

Computer Science Department - University of Regina

Regina, Canada

SESSIONAL LECTURER

CS340 Advanced Data Structures and Algorithm Design

Summer 2020

CS330 Introduction to Operating Systems

Winter 2020

CS115 Object-Oriented Design

Winter 2020

CS310 Discrete Computational Structures

Fall 2019

GUEST LECTURER

CS875 Database Systems

Fall 2018

CS838 Uncertain Reasoning in AI

Spring 2017

LAB INSTRUCTOR & MARKER

CS210 Data Structures and Abstractions

2019

CS215 Web and Database Programming

2018

CS110 Programming and Problem Solving

2015 - 2019

Audio Visual Services - University of Regina

Regina, Canada

CLERICAL CLERK

2015 - 2019

DISTANT EDUCATION BROADCASTING OPERATOR

Winter 2016

CO-OP PLACEMENT

Fall 2013

Guhring Brasil Ferramentas LTDA

Joinville, Brazil

LOGISTIC ANALYST

2011 - 2012

Education

University of Regina

Regina, Canada

PH.D. OF SCIENCE STUDENT IN COMPUTER SCIENCE

2016 - 2020

Study emphasis Deep Learning & Probabilistic Graphical Models

MASTER OF SCIENCE IN COMPUTER SCIENCE

2015 - 2016

Study emphasis Probabilistic Graphical Models

University of Santa Catarina State

Joinville, Brazil

BACHELOR OF INDUSTRIAL SYSTEM ENGINEERING

2009 - 2014

SENAI

Joinville, Brazil

INDUSTRIAL TRAINING COURSE - ELECTRICIAN

2007

Skills

Artificial Intelligence Deep Learning Industry 4.0 Web Development Engineering

Bayesian Networks Join Tree Propagation Python C++ Spark JavaScript PHP MySQL

Publications

Refereed Conference Papers

1. C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Teixeira. Deep convolutional sum-product networks. In *Thirty-Third AAAI Conference on Artificial Intelligence (AAAI)*, 2019
2. C. Butz, A. L. Teixeira, A. E. Dos Santos, and J. S. Oliveira. On the tree structure of deep convolutional sum-product networks. In *Thirty-Second International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 500–503, 2019
3. C. J. Butz, A. E. dos Santos, J. S. Oliveira, and A. L. Madsen. Exploiting symmetry of independence in d-separation. In *Thirty-second Canadian Conference on Artificial Intelligence (AI)*, pages 42–54, 2019
4. A. L. Madsen, C. J. Butz, J. Oliveira, and A. E. dos Santos. Solving influence diagrams with simple propagation. In *Thirty-second Canadian Conference on Artificial Intelligence (AI)*, pages 68–79, 2019
5. C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. An empirical study of Bayesian network inference with simple propagation. *International Journal of Approximate Reasoning (IJAR)*, 92:198–211, 2018
6. A. L. Madsen, C. J. Butz, J. S. Oliveira, and A. E. dos Santos. Simple propagation with arc-reversal in bayesian networks. In *Ninth International Conference on Probabilistic Graphical Models (PGM)*, 2018
7. C. J. Butz, A. E. dos Santos, J. S. Oliveira, and J. Stavrinides. Efficient examination of soil bacteria using probabilistic graphical models. In *Thirty-first International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems*, pages 315–326, 2018
8. C. J. Butz, J. S. Oliveira, and A. E. dos Santos. On learning the structure of sum-product networks. In *2017 IEEE Symposium Series on Computational Intelligence (SSCI)*, pages 1–8, 2017
9. A. E. dos Santos, C. J. Butz, and J. S. Oliveira. On converting sum-product networks into bayesian networks. In *Thirtieth Canadian Conference on Artificial Intelligence (AI)*, pages 329–334, 2017
10. J. S. Oliveira, C. J. Butz, and A. E. dos Santos. Resolving inconsistencies of scope interpretations in sum-product networks. In *Thirtieth Canadian Conference on Artificial Intelligence (AI)*, pages 305–315, 2017
11. C. J. Butz, A. E. Dos Santos, and J. S. Oliveira. On finding relevant variables in discrete bayesian network inference. In *Thirtieth International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 730–735, 2017
12. C. J. Butz, A. E. dos Santos, and J. S. Oliveira. Relevant path separation: A faster method for testing independencies in bayesian networks. In *Eighth International Conference on Probabilistic Graphical Models (PGM)*, pages 74–85, 2016
13. C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. Bayesian network inference with simple propagation. In *Twenty-ninth International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 650–655, 2016
14. C. J. Butz, A. E. dos Santos, J. S. Oliveira, and C. Gonzales. On a simple method for testing independencies in bayesian networks. *Computational Intelligence (CI)*, 34(3):789–801, 2017
15. A. L. Madsen, C. J. Butz, J. S. Oliveira, and A. E. dos Santos. On tree structures used by simple propagation. In *Twenty-ninth Canadian Conference on Artificial Intelligence (AI)*, pages 207–212, 2016
16. C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. Bayesian network inference with simple propagation. In *Twenty-ninth International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 650–655, 2016
17. C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. Testing independencies in bayesian networks with i-separation. In *Twenty-ninth International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 644–649, 2016
18. C. Butz, J. Oliveira, and A. dos Santos. Darwinian networks. In *Twenty-eighth Canadian Conference on Artificial Intelligence (AI)*, pages 16–29, 2015
19. C. J. Butz, J. S. Oliveira, and A. E. dos Santos. Determining good elimination orderings with Darwinian networks. In *Twenty-eighth International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, pages 600–603, 2015

Papers in Refereed Journals

1. C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. An empirical study of Bayesian network inference with simple propagation. *International Journal of Approximate Reasoning (IJAR)*, 92:198–211, 2018
2. C. J. Butz, A. E. dos Santos, J. S. Oliveira, and C. Gonzales. An empirical study of testing independencies in bayesian networks using rp-separation. *International Journal of Approximate Reasoning (IJAR)*, 92:270–278, 2018
3. C. J. Butz, A. E. dos Santos, J. S. Oliveira, and C. Gonzales. On a simple method for testing independencies in bayesian networks. *Computational Intelligence (CI)*, 34(3):789–801, 2017
4. C. J. Butz, J. S. Oliveira, and A. E. dos Santos. On Darwinian networks. *Computational Intelligence (CI)*, 33(4):629–655, 2017
5. A. E. dos Santos, A. T. Bringhenti, J. I. Zimmermann, G. O. Verran, R. K. Scalice, and D. Bond. Proposal and evaluation of a selection procedure for cast parts. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 39(8):3151–3163, 2017

Service

2016	President Treasurer Secretary , University of Regina Jiu Jitsu Club	Regina, Canada
2020		
2016	President Treasurer Secretary , Brazilian Student Association (BRASA)	Regina, Canada
2020		
2018	Logo & Website creator , University of Regina Jiu Jitsu Club	Regina, Canada
2016	Logo creator , RPIRG The Green Patch Garden	Regina, Canada
2010	Introduction to Computers for the Elderly and Adults , University of Santa Catarina State	Joinville, Brazil

Awards

University of Regina	Regina, Canada
GRADUATE STUDIES RESEARCH FELLOWSHIP (GRF)	
\$22,623.38	2016 - 2020
SCHOLARLY AWARDS	
\$5,600	Winter 2016
\$6,000	Fall 2015
\$3,500	Summer/Spring 2015
\$65,023.41 BLR	2013
University of Santa Catarina State	Joinville, Brazil
SCIENCE WITHOUT BORDERS SWG/CANADACBIE	
\$65,023.41 BRL	2013

Languages

English	<i>Advanced Professional Proficiency</i>
Portuguese	<i>Functionally Native Proficiency</i>
Spanish	<i>Elementary Proficiency</i>
French	<i>Elementary Proficiency</i>

About

Brazilian, 28 years old
3rd kyu (light blue belt) in Shorinji Kan Jiu Jitsu
Cartoon website <https://evahqs.tumblr.com/>
Ukulele enthusiast

References

- [1] C. Butz, J. Oliveira, and A. dos Santos. Darwinian networks. In Twenty-eighth Canadian Conference on Artificial Intelligence (AI), pages 16–29, 2015.
- [2] C. Butz, A. L. Teixeira, A. E. Dos Santos, and J. S. Oliveira. On the tree structure of deep convolutional sum-product networks. In Thirty-Second International Florida Artificial Intelligence Research Society Conference (FLAIRS), pages 500–503, 2019.
- [3] C. J. Butz, A. E. dos Santos, and J. S. Oliveira. Relevant path separation: A faster method for testing independencies in bayesian networks. In Eighth International Conference on Probabilistic Graphical Models (PGM), pages 74–85, 2016.
- [4] C. J. Butz, A. E. Dos Santos, and J. S. Oliveira. On finding relevant variables in discrete bayesian network inference. In Thirtieth International Florida Artificial Intelligence Research Society Conference (FLAIRS), pages 730–735, 2017.
- [5] C. J. Butz, A. E. dos Santos, J. S. Oliveira, and C. Gonzales. On a simple method for testing independencies in bayesian networks. Computational Intelligence (CI), 34(3):789–801, 2017.
- [6] C. J. Butz, A. E. dos Santos, J. S. Oliveira, and C. Gonzales. An empirical study of testing independencies in bayesian networks using rp-separation. International Journal of Approximate Reasoning (IJAR), 92:270–278, 2018.
- [7] C. J. Butz, A. E. dos Santos, J. S. Oliveira, and A. L. Madsen. Exploiting symmetry of independence in d-separation. In Thirty-second Canadian Conference on Artificial Intelligence (AI), pages 42–54, 2019.
- [8] C. J. Butz, A. E. dos Santos, J. S. Oliveira, and J. Stavrinos. Efficient examination of soil bacteria using probabilistic graphical models. In Thirty-first International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, pages 315–326, 2018.
- [9] C. J. Butz, J. S. Oliveira, and A. E. dos Santos. Determining good elimination orderings with Darwinian networks. In Twenty-eighth International Florida Artificial Intelligence Research Society Conference (FLAIRS), pages 600–603, 2015.
- [10] C. J. Butz, J. S. Oliveira, and A. E. dos Santos. On Darwinian networks. Computational Intelligence (CI), 33(4):629–655, 2017.
- [11] C. J. Butz, J. S. Oliveira, and A. E. dos Santos. On learning the structure of sum-product networks. In 2017 IEEE Symposium Series on Computational Intelligence (SSCI), pages 1–8, 2017.
- [12] C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. Bayesian network inference with simple propagation. In Twenty-ninth International Florida Artificial Intelligence Research Society Conference (FLAIRS), pages 650–655, 2016.
- [13] C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. Testing independencies in bayesian networks with i-separation. In Twenty-ninth International Florida Artificial Intelligence Research Society Conference (FLAIRS), pages 644–649, 2016.
- [14] C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Madsen. An empirical study of Bayesian network inference with simple propagation. International Journal of Approximate Reasoning (IJAR), 92:198–211, 2018.
- [15] C. J. Butz, J. S. Oliveira, A. E. dos Santos, and A. L. Teixeira. Deep convolutional sum-product networks. In Thirty-Third AAAI Conference on Artificial Intelligence (AAAI), 2019.
- [16] A. E. dos Santos, A. T. Bringhenti, J. I. Zimmermann, G. O. Verran, R. K. Scalice, and D. Bond. Proposal and evaluation of a selection procedure for cast parts. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 39(8):3151–3163, 2017.

- [17] A. E. dos Santos, C. J. Butz, and J. S. Oliveira. On converting sum-product networks into bayesian networks. In *Thirtieth Canadian Conference on Artificial Intelligence (AI)*, pages 329–334, 2017.
- [18] A. L. Madsen, C. J. Butz, J. Oliveira, and A. E. dos Santos. Solving influence diagrams with simple propagation. In *Thirty-second Canadian Conference on Artificial Intelligence (AI)*, pages 68–79, 2019.
- [19] A. L. Madsen, C. J. Butz, J. S. Oliveira, and A. E. dos Santos. On tree structures used by simple propagation. In *Twenty-ninth Canadian Conference on Artificial Intelligence (AI)*, pages 207–212, 2016.
- [20] A. L. Madsen, C. J. Butz, J. S. Oliveira, and A. E. dos Santos. Simple propagation with arc-reversal in bayesian networks. In *Ninth International Conference on Probabilistic Graphical Models (PGM)*, 2018.
- [21] J. S. Oliveira, C. J. Butz, and A. E. dos Santos. Resolving inconsistencies of scope interpretations in sum-product networks. In *Thirtieth Canadian Conference on Artificial Intelligence (AI)*, pages 305–315, 2017.