

SHORT BIO

Graduate student with 5 terms of experience TAing, 3 years as a Data Scientist in Brazil, and 2 years as a Machine Learning Engineer implementing solutions in PyTorch for healthcare applications. Vector Institute scholarship recipient. Research intern at Facebook AI Research (FAIR) working on lossless data compression.

EDUCATION

University of Toronto

Electrical & Computer Engineering

Doctor of Philosophy (M.A.Sc. to Ph.D. transfer)

Started Fall 2020

Undergraduate Exchange Program (1 year)

2013 - 2014

Federal University of Santa Catarina, Brazil

2010 - 2015

Bachelor of Science in Electronics Engineering

First Class Honours, 99th percentile.

TEACHING EXPERIENCE

Federal University of Santa Catarina

Teaching Assistant

- **Communications Theory** Fall and Winter 2015
Amplitude and frequency modulations; multiplexing; noise in communication systems; pulse modulation; analog-to-digital conversion; digital transmission in baseband and passband.
- **Introduction to Electronics** Fall and Winter 2013
Operational amplifiers; diodes; the bipolar junction transistor; field effect transistors; optoelectronic components.
- **Single-Variable Calculus** Fall 2010
Real-valued functions; limits; continuity; derivatives and applications; definite and indefinite integrals; integration techniques; improper integrals.

CERTI Foundation

2010 - 2013

Intern Programming Instructor

Responsible for the technical training of new and current interns. Created a training course in LabVIEW programming that is still in use as of 2021.

PUBLICATIONS

- Reys, Arthur D*, Danilo Silva*, Daniel Severo, et al. (2020). "Predicting Multiple ICD-10 Codes from Brazilian-Portuguese Clinical Notes". In: *Intelligent Systems*. Springer International Publishing, pp. 566–580.
- Ruan, Yangjun*, Karen Ullrich*, Daniel Severo*, et al. (2021). "Improving Lossless Compression Rates via Monte Carlo Bits-Back Coding". In: *International Conference on Machine Learning (ICML)*.
- Severo, Daniel, Elad Domanovitz, and Ashish Khisti (2021). "RCAQ: Regularized Classification-Aware Quantization". In: *Biennial Symposium on Communications (BSC)*.

* Equal contribution

AWARDS

Vector Scholarship in Artificial Intelligence Recipient 2020-21

2020

The Vector Scholarship in AI supports the recruitment of top students to AI-related master's programs in Ontario and is valued at \$17,500.

<https://vectorinstitute.ai/aimasters>

NSERC Applied Research Rapid Response to COVID-19 Grant 2020
 Our project titled "Canadian Hospital Simulator For Management of COVID19 Cases and Contact Tracing" was awarded \$75,000.00.
https://www.nserc-crsng.gc.ca/Innovate-Innover/CCI-COVID_eng.asp

Virtual Design Challenge Winner 2019
 Won 1st place at the VDC hosted by The University of British Columbia with my paper *Proof of Novelty*. Received a cash prize of \$3,000.
<https://github.com/dsevero/Proof-of-Novelty>

Student Merit Award and Medal 2015
 Graduated with the highest GPA ever obtained (at the time) for my major. Elected "Best Student" by the faculty of Electrical & Electronics Engineering at the Federal University of Santa Catarina.

Science Without Borders Scholarship 2013
 Awarded a full scholarship that covered tuition, transportation, necessary materials and living costs to study 2 academic semesters at the University of Toronto.

**PROFESSIONAL
EXPERIENCE**

Facebook AI Research (FAIR) Summer 2021
Research Intern

Independent Contractor 2018 - 2021
Machine Learning Engineer & Researcher

Linux Impulse 2016 - 2018
Head of Data Science

CERTI Foundation 2015 - 2016
Research Engineer

Wavetech Technology Solutions 2015
Engineering Intern

CERTI Foundation 2010 - 2013
Engineering Intern

WEG Industries Summers 2011 and 2012
Engineering Intern