# Miguel Alfredo Nunes

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# Summary

I have a bachelor degree in computer science from the State University of Santa Catarina (UDESC) and I'm currently pursuing a master's degree in philosophy at the State University of Campinas (Unicamp), where my focus is formal logic. In my <u>GitHub</u> are listed my main projects, amidst then my <u>blog</u> published by GitHub Pages, an implementation of the <u>A\* algorithm in Python</u>, an implementation of the <u>RSA algorithm in C++</u> and an implementation of a <u>simple</u> <u>HTTP server in Python</u> (the READMEs are in portuguese).

I have experience with the languages Python, C/C++, Java and Shell Script and with Git. I have been using Linux (Ubuntu and Fedora) continually since 2018. During my undergrad I was a volunteer teacher for the <u>Code Club</u> NGO in 2019. I worked for a company specialized in developing ERP systems in the time between finishing my bachelor and beginning my masters. I have published two academic papers, both written in english and in the field of formal logic.

# Technical Skills

Programming Languages Python, C/C++, Java, Shell Script, HTML and CSS (basic)

Version Control Software Git (GitHub)

Operating Systems

Linux (Ubuntu and Fedora), Windows

Database Systems

PostgresQL, MongoDB, MySQL (basic)

Other

Markdown, Latex, Google Sheets

## Education

State University of Santa Catarina (UDESC) Feb. 2017 - July 2023

Bachelor of Computer Science

State University of Campinas (Unicamp)

Mar. 2024 - On Going

Master's Degree in Philosophy

## Extracurricular Activities

#### Scientific Initiation (research) - UDESC

Aug. 2019 - Dec. 2022.

Research Activities associated with the Research Group on Foundations of Computing, supervised by Prof. Karina G. Roggia

- Volunteer from August of 2019 until January of 2020;
- PROIP scholarship holder (financed by UDESC) from February of 2020 until December of 2022.
- Studies focused on formal logic and proof assistants.

#### Tutor on a Course of Mathematical Logic (teaching) - UDESC

Aug. 2018 - Dec. 2019

Activities to assist students in the discipline, guided by professors Cláudio C. de Sá (August 2018 to December 2018) and Kariston Pereira (January 2019 to December 2019).

# Professional Experience

Technical Trainee, Softdata Soluções, Joinville, Santa Catarina

Aug. 2023 - Dec. 2023

Company focused on the development of ERP (Enterprise Resource Planning) systems.

- I worked in the maintenance of the software systems of the company and on the implementation of new features requested by customers.
- I mainly worked with the Dataflex language and with SQL for the implementation and testing of the main ERP system of the company.

## **Publications**

#### Soundness-Preserving Fusion of Modal Logics in Coq

2024

NUNES, M. A.; ROGGIA, K. G.; TORRENS, P. H. Soundness-preserving fusion of modal logics in coq. Em: Lecture Notes in Computer Science. Cham: Springer Nature Switzerland, 2025. p. 120-138.

### A Sound Deep Embedding of Arbitrary Normal Modal Logics in Coq

2022

DA SILVEIRA, A. A. et al. A sound deep embedding of arbitrary normal modal logics in Coq. Proceedings of the XXVI Brazilian Symposium on Programming Languages. New York, NY, USA: ACM, 2022. p. 1-7.

## Volunteer Work

Teacher, Code Club Brasil, Joinville, Santa Catarina

Mar. 2019 - Nov. 2019

I worked as a teacher for the NGO Code Club Brasil, giving introductory programming classes to children at the Avelino Marcante Municipal School. The goal of the NGO is to teach children and teenagers from public schools how to program. The NGO provides the teaching materials and the volunteers are responsible for teaching classes based on these materials and providing a location for the classes.

Coordinator, Code Club Brasil, Joinville, Santa Catarina

Feb. 2020 - Interrupted

It was planned that I would take on the coordination of voluntary classes at the Avelino Marcante Municipal School. The semester was planned and two classes were taught, but the activities were interrupted due to the Covid-19 pandemic.

# Languages

- Portuguese: Native, have experience with academic writing;
- English: Good reading, writing and comprehension, reasonable speaking, have experience with academic writing.