

Adriano Corbelino II

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EDUCATION

University of Massachusetts Lowell

Third-year Computer Science PhD student — GPA 4.0/4.0

Lowell, MA, USA

Jan 2024 – Now

Federal University of Mato Grosso (UFMT)

B.Sc. in Computer Science — GPA 3.62/4.0 (8.84/10.0)

Cuiabá, MT, Brazil

2017 – 2021

RESEARCH EXPERIENCE

Graduate Research Assistant

University of Massachusetts Lowell — advised by Prof. Paul Downen

2024 – Now

Lowell, MA, USA

- Study how codata and copatterns can bridge the functional and object-oriented paradigms, giving programmers a declarative way to define infinite and effectful objects.
- Developing **CoPy**, a Python language extension that brings copattern-based object-oriented programming to Python.
- Contributed to **CoScheme** [1], a Racket/Scheme macro library for compositional copatterns backed by a sound equational theory.

Undergraduate Research Assistant

Federal University of Mato Grosso

2020 – 2021

Cuiabá, MT, Brazil

- Evaluated audio data-augmentation methods for bird-call classification.

Research Assistant

Federal University of Mato Grosso

2020 – 2021

Cuiabá, MT, Brazil

- Co-created **RSDD** [2], a satellite-imagery dataset for modeling deforestation in the Brazilian state of Mato Grosso.

TEACHING EXPERIENCE

Undergraduate Teaching Assistant

Federal University of Mato Grosso

2018 – 2021

Cuiabá, MT, Brazil

- Designed problem sets and led recitations and office hours across five courses: Discrete Mathematics, Data Structures, Theory of Computation, Algorithms, and Compilers.

INDUSTRY EXPERIENCE

Software Engineer

Acerto

2021 – 2022

Remote · Belo Horizonte, MG, Brazil

- Built in-house tools that automated workflows for non-technical teams and optimized database queries at a debt-collection company.

Software Engineer Intern

NUTI-IC

2018 – 2021

Cuiabá, MT, Brazil

- Developed a health-surveillance data system and public-health dashboards for the Mato Grosso State Health Department.
- Built a report-management system for POLITEC-MT, the state forensic-services department.

AWARDS & HONORS

ICPC South America / Brazil Finalist

2021

Outstanding Graduating Student (*Aluno Destaque*)

2020/2

Federal University of Mato Grosso

TECHNICAL SKILLS

Languages Rocq/Coq, Lean, Haskell, Rust, Python, C#, C, and JavaScript

Tools & Databases PostgreSQL, Microsoft SQL Server, .NET, Git, and QGIS

Natural Languages Portuguese (native) and English (fluent)

PUBLICATIONS

- [1] P. Downen and A. Corbelino II, “CoScheme: Compositional copatterns in Scheme,” *Trends in functional programming*, Springer Nature Switzerland, 2026. doi:[10.1007/978-3-031-99751-8_10](https://doi.org/10.1007/978-3-031-99751-8_10).
- [2] R. Ventura, C. Musis, T. Ventura, and A. C. II, “RSDD: Um conjunto de dados para modelagem de desmatamentos,” *Anais do XIV workshop de computação aplicada à gestão do meio ambiente e recursos naturais*, SBC, 2023. doi:[10.5753/wcama.2023.230675](https://doi.org/10.5753/wcama.2023.230675).