

Vinicius Tikara Venturi Date

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Research Interests

String algorithms; repetitiveness measures (e.g., χ , γ , r , δ); compressed indexes; de Bruijn sequences; combinatorics on words.

Education

M.Sc. in Informatics

AUG 2024–AUG 2026 (EXPECTED)

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- Dissertation (in progress): *Repetitiveness measures in compressed string indexes: suffixient sets, BWT runs, and de Bruijn sequences* (Advisor: Leandro Miranda Zatesko).

B.Sc. in Computer Science

FEB 2019–DEC 2023

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- GPA: 0.9169/1.000 (UFPR scale).
- Undergraduate thesis: *The NP-completeness of the clique graph recognition problem* (Advisor: André Luiz Pires Guedes).

Publications and Manuscripts

Manuscript

Date, V. T. V.; Zatesko, L. M. *On the near-tightness of $\chi \leq 2r$: a general σ -ary construction and a binary case via LFSRs*. Submitted to LATIN 2026.

Peer-Reviewed Publications

Ehrenfried, H. V.; Date, V. T. V.; Todt, E. Exploring graph representation strategies for text classification. *Connection Science*, 2023. [link](#)

Ehrenfried, H. V.; Date, V. T. V.; Todt, T. B.; Aguiar, P. W.; Silva, P. H. K.; Rizzardi, N. A.; Sauer, M. C.; Rodrigues, N. C. I.; Todt, E. Um relato da experiência de construir um sistema para integração de dados e criação de indicadores para um programa governamental. In: *Proc. Latinoware*, 2023. [link](#)

Scholarships and Awards

Fundação Araucária MSc Studentship

2025–PRESENT

State Research Foundation of Paraná — Curitiba, Brazil

- Competitive studentship (Edital FA 14/2024) for the UFPR Informatics graduate programme; proposal ranked 1st among MSc applicants from the Department of Informatics.

Prêmio Estudante Destaque SBC (SBC Outstanding Student Award)

2023

Sociedade Brasileira de Computação (SBC) — Brazil

- Award from the Brazilian Computer Society, granted by faculty selection, to recognize the top graduating student of the UFPR Computer Science cohort.

Maratona SBC de Programação – Brazilian ICPC Regionals

2021, 2023

Sociedade Brasileira de Computação (SBC) — Brazil

- Twice qualified and competed in the Brazilian regional phase of the ICPC-style SBC Programming Marathon.

Research Experience

Graduate Researcher

AUG 2024–PRESENT

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- Research on relations among repetitiveness measures (χ, γ, r, δ) and their behaviour on structured texts such as de Bruijn sequences; design and analysis of algorithms for suffix trees/arrays, BWT runs, and LFSR-based generators in C++.

Undergraduate Researcher

2021–2023

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- Contributed to projects on graph-based text representations and educational data integration, including manuscript editing and supporting code; work led to one journal and one conference publication.

Research / Software Engineering Intern (20 h/week)

APR 2021–DEC 2023

Centro de Computação Científica e Software Livre (C3SL), UFPR — Curitiba, Brazil

- Developed a data integration and indicator visualisation platform for the Brazilian National Textbook Program (PNLD/FNDE) using Python, PostgreSQL, Node.js/TypeScript, and dockerized services.
- Implemented REST APIs, an e-mail-based password recovery system, and educational indicators; ran database benchmarks inspired by TPC-H.

Undergraduate Researcher (Scientific Initiation)

2019–2020

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- Created and classified programming exercises in the learning tool FARMA-ALG.

Teaching and Mentoring

Teaching Assistant

2021–2025

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- Algorithms / Graph Theory (Mar 2025–Jul 2025): guest lectures on flow algorithms (Ford–Fulkerson, Edmonds–Karp, residual graphs, min-cut) and a programming assignment on flow problems.
- ICPC Algorithms (Mar 2023–Dec 2023): co-lectured an ICPC-style problem-solving course and guided students through algorithmic strategies and implementations; in 2024, coached a student team that qualified for the Brazilian national finals.
- Introduction to Programming for Engineers (May 2021–Aug 2021): supported lab sessions, answered students' questions, and helped design and maintain programming exercises.

Academic Service

Undergraduate Thesis Committee Member

2025

Universidade Federal do Paraná (UFPR) — Curitiba, Brazil

- Examining committee member for a B.Sc. final project (Trabalho de Conclusão de Curso, TCC) in Computer Science.

Technical Skills

- **Programming:** C, C++, Rust, Python.
- **Tools:** Git, Linux, \LaTeX .
- **Languages:** Portuguese (native); English (IELTS Academic 7.5, CEFR C1); Japanese (basic).