

Gleison Souza Diniz Mendonça

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Education

P.hD. candidate, Computer Science, Federal University of Minas Gerais (UFMG), Brazil. 2020 - (graduation forecast: 11/2024)

M.Sc. Computer Science, Federal University of Minas Gerais (UFMG), Brazil. 2018 - 2020

AutoParBench: A Framework for Parallel Code verification

3rd place in Thesis and Dissertation Competition 2021 - [CTD](#)

B.Sc. Information Systems, Federal University of Minas Gerais (UFMG), Brazil. 2013 - 2017

3rd place in graduating class.

Technician in Informatics, Technical School of Minas Gerais (COTEMIG), Brazil. 2010 - 2012

Experience

- Mar 2023 - present: Member of the Advisory Board to the Minas Gerais State Attorney-General of Accounting.
 - https://doc.tce.mg.gov.br/Home/ViewDiario/2023_02_27_Diario.pdf
- Sep 2022 - present: Collaborator of the **Topete** research group: <https://topete.science/>
- Jul 2022 - Aug 2023: **Temporary Lecturer, UFMG, Belo Horizonte**
 - <https://www.in.gov.br/web/dou/-/edital-n-1061-de-10-de-junho-de-2022-408746725>
- Dec 2020 - (graduation forecast: 11/2024): **P.hD. candidate, Inscript Laboratory, UFMG, Belo Horizonte**
 - Extending the [Kuifje Programming Language](#) and the [Kuifje-Compiler](#).
 - Measuring how the vulnerability of a system is affected by dynamic secrets generated through different strategies.
- Apr 2020 - Dec 2020: **Software Consultant**
 - Worked on developing Kubernetes, Docker, and Golang based applications. <https://inspr.com/>
- Jan 2015 - Mar 2020: **Research assistant, Compilers Laboratory, UFMG, Belo Horizonte**
 - Developed AutoParBench, a framework for parallel code verification using OpenMP. Link: [AutoParBench](#)
 - Designing, implementing, and testing compiler analyses and optimizations.
 - Developed DawnCC, a tool for automatic parallelization of programs written in C/C++. Link: [DawnCC](#)
 - Worked on project Etino, a tool that automatically inferred the impact of control divergences in high-performance GPGPU code.
 - Participated in the development of TaskMiner, a compiler optimization for automatically parallelizing irregular applications through task deployment. Link: [TaskMiner](#)
 - Systematic study of the literature in cutting edge compiler technologies.
 - Development mostly done in C++, LLVM/Clang, and Bash.
- Apr 2019 - Aug 2019: **Intern, Lawrence Livermore National Laboratory, California, USA**
 - Designing, implementing, and testing compiler analyses and optimizations.

- Worked on projects to provide installation facilities of the Rose compiler. Links: [Rose-apt-get](#) [Rose-docker-image](#). Rose compiler: [Rose](#)
- Developed AutoParBench, a test framework for OpenMP-based Automatic Parallelization Compilers and Tools. Link: [AutoParBench](#)
- Jan 2014 - Jun 2014 : **UFMG Programming Marathon Qualifiers**, Belo Horizonte, Brazil
Participated in the qualifiers for the Minas Gerais Programming Marathon.
- Mar 2012 - Mar 2013: **Informatics Intern, Banco do Brasil**, Belo Horizonte, Brazil
Provided technical support at a logistic service center.
Using Microsoft Windows, Microsoft Office, Bash Script, Windows Server

Selected Publications

- Gleison Souza Diniz Mendonça, Breno Campos Ferreira Guimarães, Pérciles Rafael Oliveira Alves, Márcio Machado Pereira, Guido Araújo and Fernando Magno Quintão Pereira *Automatic Insertion of Copy Annotation in Data-Parallel Programs*. SBAC. 2016.
- Gleison Mendonça, Breno Guimarães, Pérciles Alves, Márcio Pereira, Guido Araújo, and Fernando Magno Quintão Pereira. DawnCC: Automatic Annotation for Data Parallelism and Offloading. ACM TACO. 2017.
- Pedro Ramos, Gleison Mendonça, Divino Soares, Guido Araújo and Fernando Magno Quintão Pereira. *Automatic Annotation of Tasks in Structured Code*. PACT. 2018.
- Gleison Mendonça, Chunhua Liao and Fernando Magno Quintão Pereira. AutoParBench: A Unified Test Framework for OpenMP-based Parallelizers. ICS 2020.

Technical Skills

- C/C++, Java, C#, Golang, Haskell (previous experience).
- Web development using MySQL, HTML, CSS, JavaScript, PHP.
- Other technologies: LLVM, Visual Studio, Bash Script, Docker, Kubernetes.
- Other relevant skills: Quantitative Information Flow, Data Privacy, Parallel Computing, Compilers

Languages

Portuguese - Native language.

English - Intermediate proficiency