# Caio Henrique Segawa Tonetti

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## Previous Employment

**SG Sistemas de Automação Ltda**
*Internship*                                        *October 2017–December 2017*
Worked as a software developer using the C++ programming language. Responsible for refactoring the system backend.

## Education

### Academic Background

**Federal University of Minas Gerais**
*Master's degree in Computer Science*                    *March 2018 – February 2020*
Researching techniques for resource allocation in quantum computers using graph theory.

**State University of Maringá**
*Bachelor in Computer Science*                          *February 2012 – January 2017*
Researched the effects of static and dynamic code analyzers on the quality of optimizations.

### Notable Projects

- **HackBrazil:**
  - Hackathon that our team of three, with the project InVisum, was in the best 5 projects of more than 300, presenting them in Boston at the Brazil Conference, held at MIT and Harvard.

- **Hackerspace Maringá:**
  - I am a co-founder and was the president of the organization for almost 3 years; This resulted in a thriving laboratory with many projects involving gesture processing, robot creation, Internet of Things and courses of programming and robotics open for all.

- **High Performance Computing Experimental Laboratory:**
  - Researched the problems of selection and ordering of optimization sequences in modern compilers. Advisor: Anderson Faustino da Silva

- **Google Summer of Code 2019 participant with KDE Community:**
  - Worked on the ROCS graph theory IDE using the C++ programming language.
    More information at https://community.kde.org/GSoC/2019/StatusReports/CaioTonetti

- **Season of KDE 2020**
  - Worked as a mentor for two students in the software ROCS graph theory IDE. Season of KDE is an outreach program hosted by the KDE community.

- **Google Summer of Code 2020 mentor with KDE Community:**
  - Working on the ROCS graph theory IDE as a mentor.
    More information at https://summerofcode.withgoogle.com/projects/#4532377939869696.

- **Operational Research Laboratory (Current):**
  - Researching algorithms for the *Token Swap* problem on different graph classes. Advisor: Vinicius Fernandes dos Santos

### Experiences

- **Teacher Assistant:** I was the teacher assistant in the classes of *Architecture and Organization of Computers* for one semester and *Formal Languages and Automatons* for four semesters during the graduation. During the master's I was teacher assistant in the class of *Algorithm Design and Analysis* for the graduate students (master and doctorate) for one semester. I was responsible in helping students and creating the practical assignments.

- **Programming Contests:** Participated in four editions of the regional's of the *ACM International Collegiate Programming Contest* and the related training program in the State University of Maringá to improve my programming abilities in C++.

- **Interchange:** In January 2014 to February 2014 I traveled to Toronto, Canada to study English in Kaplan, an international preparatory school for university and exams, where got my certificate on the B2 English level.

## Published Articles

**Pinhão: An Auto-tunning System for Compiler Optimizations Guided by Hot Functions**
*Journal of Universal Computer Science*                          *March 2019*

**Enfield: An OpenQASM Compiler**
*IX Congresso Brasileiro de Software*                          *September 2018*

**A Design Space Exploration of Compiler Optimizations Guided by Hot Functions**
*International Conference of the Chilean Computer Science Society*          *October 2016*