

Mário Feroldi Filho

CONTACT INFORMATION

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github.com/feroldi
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Currently living in Copacabana, Rio de Janeiro.

EDUCATION

Salesiano Auxilium Catholic University, Araçatuba, Brazil
B.S., Computer Engineering
GPA: 3.45/4.0

Feb 2015 – Dec 2019

LANGUAGES

Advanced English
Native Brazilian Portuguese

PROFESSIONAL EXPERIENCE

Grupo Saludem, *Software Engineer*

Jan 2019 – Jan 2020

- Developed the CI/CD cycle (continuous integration and deployment) for their hospital management software using Python, Docker and GitHub Actions.
- Developed a clinical appointment-booking mobile application for the AME clinics using the Flutter framework.
- Trained the development team to use Git commands and GitHub Workflow.

RESEARCH EXPERIENCE

Salesiano Auxilium, *Undergraduate Research*

Aug 2018 - Jun 2019

- Researched compiler optimizations in code generation for multiple processor architectures.
- Elaborated on instruction selection and the pattern matching and selection problem.
- Researched how LLVM, GCC and superoptimizers select instructions and generate quality code.

Salesiano Auxilium, *Undergraduate Thesis*

Feb 2019 - Dec 2019

- Researched the Regionalized Value State Dependency Graph (RVSDG) as an Intermediate Representation (IR) for multiple compiling stages.
- Implemented a subset of the RVSDG IR and a few transformations that turned code from higher to lower level at each pass.
- The solution avoids implementation duplication of common optimizations when dealing with different IRs, such as Common Subexpression Elimination and Constant Propagation.

PERSONAL PROJECTS

CCI: C11 Compiler Infrastructure

github.com/feroldi/cci

- Developing a compiler infrastructure to manipulate and compile C code.
- Meant as a personal research project to acquire hands-on experience on compiler engineering.
- Used C++17 for development, GoogleTest for unit tests, and CMake for the build system.

Ruke: A microkernel experiment

github.com/feroldi/ruke

- Developed a microkernel for the x86 architecture.
- An experiment with the Mozilla's Rust programming language.
- Used Rust for most of the development, and x86 Assembly for the low-level bits.

Cognita: A flashcard system mobile application

github.com/feroldi/cognita

- A mobile application to optimize the learning process of any subject by using the principle of spaced repetition.
- Implemented the Leitner system for the training sessions.
- Used the Flutter framework, and the SQLite embedded database.

TECHNICAL
SKILLS

- Bash, GNU/Linux, Git
- C, C++, Rust, Python, x86 Assembly, Haskell, Java, Dart, C#
- CMake and Ninja build systems
- Familiarity with the Clang and LLVM codebase
- GitHub, GitHub Actions, Docker
- Firebase, PostgreSQL, SQLite, RESTful APIs
- Flutter framework

OTHERS

Top 10% on the C++ tag on Stack Overflow	since Jan 2019
Placed 348th out of 1156 at the XXIII Maratona SBC First Phase	Sep 2018
Undergraduate Teaching Assistant for Compilers	Aug 2018
Gave a talk to my university colleagues on C++14 and its features	Aug 2016
Undergraduate Teaching Assistant for Programming Logic and Algorithms	Jan 2015