Rafael Figueira Gonçalves | MSc

Italo-brazilian, 27 years old, married, full-stack engineer, automation and cat enthusiast.

Academic Formation

UEL - Universidade Estadual de Londrina Londrina PR 2020-2023

Computer Science Master's degree

UENP - Universidade Estadual do Norte do Paraná **Bandeirantes PR**

Computer Science Bachelor's degree

Cardiff and Vale College Cardiff UK 2013-2015

A-Levels in Mathematics, Statistics, and Computing

Professional Experience

US (Remote) Outlier

Code Reviewer for RLHF (AI/LLM) 2024-Current

MartEye Galway IE (Remote) Node, React-Native, Expo, Next, Electron, GH Actions, and GCP 2022-2023 (13 Months)

Curitiba PR (Remote) MM Digital

Node, React, GraphQL, Electron, and Browser Extension 2021-2022 (18 Months)

TARS Tecnologia Londrina PR (Hybrid)

Vue, PWA, PostgreSQL, Knockout, and .NET 2020-2021 (13 Months)

Multiple Clients Brazil (Remote)

2018-2020 (24 Months) Unity3D, Android Native, and React

Bandeirantes PR Fundação Araucária

Scientific Scholarship Projects 2017-2019 (36 Months)

Academia de Inglês Washington **Bandeirantes PR** English Teacher 2016-2017 (12 Months)

SetupJr **Bandeirantes PR**

Vanilla Web and WordPress 2015-2016 (12 Months)

The Valleys Regional Equality Council **Abercynon UK**

Web Design - IT Intern 2012 (3 Months)

Languages

Portuguese: Native (born and educated in Brazil).

English: Advanced (lived and studied for 4 years in the United Kingdom).

Italian: Advanced (lived and studied for 2 years in Italy).

French: Intermediate (lived and studied for 1 year in Switzerland).

2015-2019

Notable Projects and Interests

Ownership of Work Projects: during my position at MartEye, I took full ownership of a project I suggested: migrating a client Node script into an Electron application, which added lots of new high-quality features, and lowered drastically the need for customer support. Unfortunately, I cannot provide a link as it is proprietary software, but I do encourage getting in touch with my previous manager and asking about it.

Mentoring Experience: during my position at MM Digital, I was responsible for mentoring a junior developer, coordinating meetups, reviewing pull requests, and enforcing good practices.

Academic Research in Software Engineering: mentored by PhD André Luís Andrade Menolli. The master's thesis and publications were focused on researching, proposing, and testing a Model-Driven Development approach, targeting Cyber-Physical devices. This research has produced a framework and a prototype tool that generates Micro-Controller C++ source code from visual diagram editing.

Dozens of Personal Projects: Multiple archived projects, from VoIP tools, tourism apps, soundboards, to concept games, totaling 50k+ downloads on Google Play without any advertisements.

Participation in Developer Jams and Hackathons: for example this project was developed in 8 hours for a LudumDare event: www.github.com/rzfzr/LD38.

Involvement in Open-Source Community: Interested in open projects, contributed to multiple GitHub repositories, I am the current maintainer of the following library: www.npmjs.com/package/toggl-api.

Innovation and Ownership Visions: During and after my graduation, I participated in entrepreneurship events, developing my own products with colleagues, one of these projects received state funding for startup stimulus, and won a significant money/mentorship prize at an innovation competition (Desafio Flex Inovação).

Multidisciplinary approach and interests: I have been immersed in multiple areas, not all intrinsically software-based. Such as 3D modeling, video editing, game making, beekeeping, pisciculture, machining, electrics, and electronics.

Interest in Education: I have organized numerous workshops within university events and created educational tools. Additionally, I served as the student monitor for the programming class for two years.

Contributed to NASA's Space Place Prime: Assisted in the development and testing of the Android application.

Technical Skills

Languages: JavaScript, TypeScript, Python, Golang, C++, C#, Java, SQL and AutoHotKey.

Technologies: Node, React (multiple state-management libraries, Redis, Redux, XState, Zustand), React-Native, Vue, PWA, KnockoutJS, Svelte, MUI, Vuetify, Tailwind, Jest, Mocha, webpack, vite, Electron, Google Cloud Platform, Firebase, MongoDB, PostgreSQL, Git, LaTeX, Regex, Unity3D, Chromecast, Chromium Browser Extensions, Containers, Airtable, and Arduino Micro-controllers.

NPM Packages: axios, express, moment, toggl-api, gojs, prismjs, @mui/material, @capacitor/android, @capacitor/core, vuex@next, vue-router, vue-cli-plugin-electron-builder, vue-clipboards, ytdl-core, ytsr, googleapis, dateformat, @babel/polyfill, @projectstorm/react-diagrams, electron, eslint, speechyl, fuse.js, youtube-dl-exec, google-translate-api, i18n, react-router, react-redux, react-tooltip, console-feed.

Currently Learning: HTMX, R, Proxmox, and P5.js.

Publications and Patents

MDD4CPD: Model Driven Development Approach Proposal for Cyber-Physical Devices, SBSI 2022 - Main Track, 10.1145/3535511.3535542.

An Analysis of the Quality of Model Driven Development Solutions Applied to Cyber-Physical Devices,

SBQS 2022 - Main Track, 10.1145/3571473.3571484.

Systematic Mapping on Internet of Things' Client-Sided Development,

SBSI 2022 - Main Track, 10.1145/3535511.3535541.

MDD4IoT: Model-Driven Development Framework Proposal for Internet of Things, SBQS 2021 - WTDQS, article 18554.

Factors Related to the Quality of Computer Science Teacher Education Courses: A Public Data Analysis,

RBIE 2021 - Main Track, 10.5753/rbie.2021.29.0.209.

SmartPet - Embedded System for Smart Pet Feeder Control,

2018 - Computer Program **Patent**: BR512020001112-8, Registration Institution: INPI - National (Brazilian) Institute of Industrial Property.

Configuration of IoT Devices Using MQTT Protocol for Arduino,

10/2017 - SEMINÁRIO DE INFORMÁTICA E TECNOLOGIA, (SECAPEE 4345).

Model-Driven Development Approach for Data Persistence in Java Using Acceleo, 10/2017 - SEMINÁRIO DE INFORMÁTICA E TECNOLOGIA, (SECAPEE 4245).