

# GUILHERME GONÇALVES

## Computer Engineer

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**📍** Geneva, Switzerland



## EXPERIENCE

### Scientific Researcher & Software Engineer

#### CERN – European Organization for Nuclear Research

**📅** Mar 2019 – Present    **📍** Geneva, Switzerland

- Designed and developed an energy estimation algorithm for the ATLAS Tile Calorimeter.
- The tool is based on machine learning techniques and was developed using C++ in a world-wide distributed system.
- Created a pulse generator used to simulate electronic readouts for data processing and physics analysis.

### Full-stack Developer & Software Engineer

#### O2 Filmes

**📅** Sept 2018 – Present    **📍** Remote

- Developed a robust and online text editor and project manager dedicated to screenwriters.
- Developed its Back-end using Ruby on Rails and its Front-end using React.
- Implemented features such as multi-user tracking, data visualization, notifications, file upload, advanced graphical interface features, etc.

### Full-stack Developer & Software Engineer

#### DataHex Tecnologia em Informática

**📅** May 2016 – Jun 2018    **📍** Nova Friburgo, Brazil

- Developed and Designed an Event Ticket application for Android with data synchronization and Bluetooth printer.
- Developed and Designed a cloud-based Point of Sale system with business management features.
- Developed its Back-end using NodeJS and its Front-end using AngularJS following the micro-services approach.
- Developed a desktop application using Electron with data synchronization across the internet and among multiple local network nodes (using P2P).
- Developed an industry-standard authentication system implementing the OAuth 2.0 and OpenID Connect protocols.

### Full-stack Developer & Mobile Developer

#### Vista Group Network

**📅** Jun 2014 – Apr 2016    **📍** Nova Friburgo, Brazil

- Developed a cloud-managed parking software using Android devices for ticketing and infringement monitoring.
- Developed an iOS and Android application for parking tickets purchase using Ionic and VB-Net.
- Created software to detect free parking spaces using image processing from surveillance cameras. The tool was developed using Python and Open-CV.

## EDUCATION

### Master degree in Computational Modeling

#### Rio de Janeiro State University

**📅** Jan 2018 – Present

### Bachelor degree in Computer Engineering

#### Rio de Janeiro State University

**📅** Jan 2012 – Aug 2017

## ACHIEVEMENTS



### Cum Laude Honors – Rio de Janeiro State University

Academic honors awarded due to the high average grade.

## STRENGTHS & SKILLS

Full-stack Development

Mobile Development

Machine Learning

Image Processing

Cloud Computing

Software Engineering

C++

Java

Python

JavaScript

Ruby

PHP

Lua

Git

Docker

Spring

Hibernate

Ruby on Rails

Node JS

Angular JS

React

Express

Electron

Ionic

Tensorflow

Scikit Learn

Numpy

SQL Databases

NoSQL Databases

OAuth

OpenID

## LANGUAGES

Portuguese

English

French

Spanish



## COURSEWORK

- Signal Processing
- Neural Networks
- Statistical and Probabilistic Methods

## PUBLICATIONS

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### Conference Proceedings

- Gonçalves, G.I., B.S.M. Peralva, L.M. Andrade Filho, et al. (2018). "Energy Estimation Based On Wiener-Hopf Filtering For The ATLAS Tile Calorimeter". In: *Anais do XXI Encontro Nacional de Modelagem Computacional*. Brazil.
- Gonçalves, G.I., B.S.M. Peralva, R.P. Marques, et al. (2017). "Classification Of The Masticatory Side Pattern Using Digital Image Processing". In: *Anais do XX Encontro Nacional de Modelagem Computacional*. Brazil.
- Gonçalves, G.I., W.R. Telles, et al. (2015). "Development Of An Application For Monitoring Real-Time Water Levels In The Bengalas River Based On Direct And Inverse Problems Technical". In: *Anais do XVIII Encontro Nacional de Modelagem Computacional*. Brazil.

## REFEREES

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