

# GUILHERME FRÓES SILVA

@ codefroes@gmail.com

+55 51 995821652

Porto Alegre, Brazil

linkedin.com/in/codefroes

## EXPERIENCE

### Researcher

#### LABIMA (Image Lab) - PUCRS

Aug 2015 – Ongoing

Porto Alegre, Brazil

Research focus in automatic shadow removal from aerial images for the United States Air Force Grant regarding the shadow problem. In Jan 2016, visited The University of New Mexico and Transparent Sky.

#### Accomplishments

- Development of near-real time automatic shadow detection software powered by GPU processing, using OpenCV and CUDA technology.
- TA in Signals and Systems discipline for undergraduates.

### Maintenance Intern

#### Rede Brasil Sul de Televisão

2014 – 2015

Porto Alegre, Brazil

Activities involved maintenance of electronic devices.

- Learned how to work in teams.
- Got the feel of a Corporate Environment

### Internship Placement

#### Birmingham Centre for Railway Research and Education

Jun 2013 – Sep 2013

Birmingham, UK

Activities involved the development of projects and maintenance of machinery and equipment. Focus on requirement extraction, concept design, component selection, interfacing with 3rd party hardware, firmware development, embedded programming, real-time motor control, and mechanical design and construction.

#### Accomplishments

- Development of self-contained autonomous measurement system embedded on a Raspberry Pi.

## EDUCATION

### Master's Degree in Electrical Engineering

#### PUCRS

Aug 2015 – Ongoing

Porto Alegre, Brazil

Expected to graduate at Jul 2017.

### Sandwich Program in Electrical Engineering

#### The University of Birmingham

sep 2012 – sep 2013

Birmingham, UK

### B.Eng in Automation and Control Engineering

#### PUCRS

2009 – 2015

Porto Alegre, Brazil

Final year project was "Project and Control of a Rotary Dual-Stage Actuator" inspired by the Dual-Stage Actuators of recent HDDs.

## SOCIAL LIFE

Inline Roller Hockey Player

Technology Enthusiast

## SUMMARY

Master's Degree student in Electrical Engineering at PUCRS - Brazil. Current research involves image processing for automatic shadow detection and removal in aerial images. Knowledge in Digital Image/Signal Processing and Control Engineering. Has strong intercultural competence from studying abroad at The University of Birmingham - UK.

## ACHIEVEMENTS



#### Student's Representative

Member of the Graduate Program Committee



#### United States Air Force Grant

Participates in the group researching the shadow problem



#### Year-Abroad Scholarship

Intercultural and educational growth from Science without Borders program in the United Kingdom



#### Line Tracking Robot Competition

Secured 2nd place in The University of Birmingham's Egg Race (2013)

## SKILLS

C/C++

CUDA

OpenCV

Linux

Python

Digital Image/Signal Processing

PCB Design

Control System Analysis and Design

## LANGUAGES

Portuguese (native)

English

Spanish



## REFEREES

Prof. Dario F. G. Azevedo, Ph.D

@ dario@pucrs.br

✉ PUCRS, Porto Alegre  
Rio Grande do Sul, Brazil

Prof. Juarez Sagebin Corrêa

@ juarez.correa@pucrs.br

✉ PUCRS, Porto Alegre  
Rio Grande do Sul, Brazil

Dr. Edward Stewart

@ e.j.c.stewart@bham.ac.uk

✉ University of Birmingham  
Edgbaston, Birmingham, UK