



Rafael Claro Ito

Electrical Engineer
HW & SW Developer
Data Scientist

- 03/02/1992
- Rua Gilberto Pattaro, 150 · 13084-375
- Campinas, SP · Brazil
- +55 19 98810-2615
- ito.rafael@gmail.com
- linkedin.com/in/itorafael
- github.com/ito-rafael
- facebook.com/ito.rafael92
- ito.rafael92

Languages

- English
- Portuguese
- Italian
- French
- Spanish
- Japanese

Awards

- 2009 6th place at OSA
- 2009 Silver Medal at OBMEP
- 2008 Silver Medal at OBMEP
- 2008 Certificate of Merit at OMU
- 2007 Honorable Mention at OBMEP
- 2006 Honorable Mention at OBMEP

OBMEP: Brazilian Public Schools Mathematics Olympiad
OSA: UNICAMP Physics Olympiad
OMU: UNICAMP Mathematics Olympiad

Education

Graduate

University of Campinas

Jan 2017 – current

Campinas/SP



Part-time Masters degree without being officially enrolled.

	Subject	Credits	Professor(s)	Semester	Grade
IA353A	Redes Neurais	4	Fernando José Von Zuben	1s2020	in progress
IA376E	Tópicos Em Engenharia de Computação VII ↔ Redes Neurais Profundas Para Processamento de Linguagem Natural	4	Roberto de Alencar Lotufo	1s2020	in progress
IA006C	Tópicos em Sistemas Inteligentes II ↔ Aprendizado de Máquina	4	Levy Bocatto Romis Ribeiro de Faissol Attux	2s2019	A
IA368N	Tópicos em Engenharia de Computação V ↔ Introdução à Robótica Móvel	4	Eleri Cardozo Eric Rohmer	2s2017	A
IA750A	Engenharia de Reabilitação	4	Antonio Augusto Fasolo Quevedo	2s2017	A
IA368W	Tópicos em Engenharia de Computação V ↔ Métodos Estocásticos Para Robótica Móvel	4	Eleri Cardozo Eric Rohmer	1s2017	A
IE327P	Tópicos Especiais em Microeletrônica III ↔ Sensores, Condicionamento e Aquisição de Dados	4	Elnatan Chagas Ferreira	1s2017	A

*table information in Portuguese

Undergraduate

University of Campinas

Jan 2011 – Dec 2016

Campinas/SP



	Subject	Credits	Professor	Semester	Grade
EA999A	Tópicos em Engenharia de Computação ↔ Curso Teórico-Prático de Redes Neurais Convolucionais	4	Roberto de Alencar Lotufo	Férias de Verão 2020	8.9

*table information in Portuguese

Undergraduate (Student Exchange Program)

Queen Mary University of London

Sep 2014 – Aug 2015

London



Studies sponsored by the Brazilian government due to academic merit. Science without Borders (SwB) student exchange program.

Further Education

Technical College of Campinas - UNICAMP

Jan 2007 – Jul 2010

Campinas/SP



Selected to work as a Teaching Assistant of the technical course.

Machine Learning Portfolio

Jupyter notebooks:

Computer Vision:

- MNIST: Linear Classifier
- MNIST: Extreme Learning Machine (ELM)
- MNIST: Multilayer Perceptron (MLP)
- MNIST: ConvNet (CNN)
- Transfer Learning: Cats and Dogs
- Transfer Learning (last layer): Fruits360
- Transfer Learning (fine tuning): Fruits360

Natural Language Processing (NLP):

- Language Model
- Sentiment Analysis (IMDb dataset) using:
 - Bag-of-Words
 - TF-IDF
 - Simplified Self-Attention
 - Transformer (Encoder only)
 - BERT
- T5 English to Portuguese Translator

Video Processing:

- YOLO ...in progress
- MobileNets ...in progress

One-page papers summary:

*available only in Portuguese

- "A Neural Probabilistic Language Model", 2003
↔ summary:
- "A Unified Architecture for Natural Language Processing: Deep Neural Networks with Multitask Learning", 2008
↔ summary:
- "Efficient Estimation of Word Representations in Vector Space", 2013
↔ summary:
- "Deep Learning", 2015
↔ summary:
- "Effective Approaches to Attention-based Neural Machine Translation", 2015
↔ summary:
- "Attention Is All You Need", 2017
↔ summary:
- "BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding", 2019
↔ summary:
- "Exploring the Limits of Transfer Learning with a Unified Text-to-Text Transformer", 2019
↔ summary:
- "The Curious Case of Neural Text Degeneration", 2019
↔ summary:

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Programming Skills

Python	● ● ● ● ● ●
↳ PyTorch	● ● ● ● ● ●
↳ NumPy	● ● ● ● ● ●
↳ TensorFlow	● ● ● ● ● ●
C	● ● ● ● ● ●
Assembly	● ● ● ● ● ●
VHDL	● ● ● ● ● ●
Ladder Logic	● ● ● ● ● ●
LaTeX	● ● ● ● ● ●


Softwares Experiences

- Linux
- MATLAB/Octave
- Git
- Docker
- Jupyter Notebooks
- Anaconda
- Ansible
- Zabbix
- Qt
- CodeWarrior
- Kinetis Design Studio
- Quartus (Altera)

Embedded Systems


- BeagleBone Black
- Raspberry Pi
- FRDM-KL25Z
- FRDM-K64F
- Arduino
- FPGA

References

 João da Silva

Head of blah

- **Relação:** ex-boss
- **contato:** joao.silva@gmail.com

 Fulano Beltrano

Professor at Unicamp

- **Relação:** ex-professor
- **contato:** fulanobeltra@gmail.com

Working Experience

Technological Development Analyst

CNPEM/LNLS

Jan 2016 – current

Campinas/SP



Blah

Teaching Assistant

University of Campinas

Jan 2016 – Jul 2016

Campinas/SP



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Scientific Research

Queen Mary University of London

Jun 2015 – Sep 2015

London



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Electronics intern

CPqD - Telecommunications Research and Development Centre

Jan 2010 – Jun 2010

Campinas/SP



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Teaching Assistant

Technical College of Campinas

Jan 2009 – Dec 2009


Campinas/SP



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Publications

October 2019

 **Exploring Embedded Systems' Dedicated Cores for Real-Time Applications**
P. H. Nallin, G. R. S. Franco, R. C. Ito, and A. R. D. Rodrigues
17th Int. Conf. on Accelerator and Large Experimental Physics Control Systems (ICALEPCS'19)

October 2019

 **Software and Hardware Design for Controls Infrastructure at Sirius Light Source**
G. R. S. Franco et al.
17th Int. Conf. on Accelerator and Large Experimental Physics Control Systems (ICALEPCS'19)