Ana Rodrigues - *Resume*

Ph.D. in Electrical Engineering, 18 Years in Education
STEM / STEAM Teacher and Content Developer
Toronto, ON - +1 (647) 210-3588
ana@garagelab.ca

SUMMARY

- Experienced STEM / STEAM Teacher, Content Developer and Academic Director with a demonstrated history in active learning methodologies, such as Creative Learning, and also 18 years experience in teaching from K-12 to Postgraduate students.
- 5 years of experience in Customer Service in the information technology industry, specially working with AI products for recommendation systems.
- Programmer for more than 20 years in C++, Java, JavaScript, HTML, CSS, Scratch Jr., Scratch, Makey Makey and introductory level AI simulations in Python.
- In my spare hours I volunteer with Cycle TO, a member-supported not-for-profit organization that works to transform our city's cycling culture. We advocate for a safe, healthy and vibrant cycling city for all.

EDUCATION

Ph.D. in Electrical Engineering
UFMG, Brazil - July 1999 to July 2003
Development of a Java software to calculate the Electromagnetic Fields of Mobile Phones in the Human Head. One year as an invited student at Imperial College London.

Electrical Engineering Degree
PUC MINAS, Brazil - July 1994 to June 1999

Electronics Technician
COLTEC - Brazil - Jan 1990 to Dec 1993

SKILLS

- Teaching (18 years)
- Teacher Training (5 years)
- Management (5 years)
- Programming (20+ years)
- Robotics (10+ years)
- STEAM/STEM (5 years)
- Creative Learning (5 years)
- Active Methodologies (5 years)
- Microsoft Office / Mac OS (10+ years)
- Photoshop / Digital Arts (5 years)

WORK EXPERIENCE

Garage Lab - Toronto, ON - *Founder / Consulting services*
July 2021 to Present
Garage Lab (garagelab.ca) is a consulting company in Canada that offers personalized STEM/STEAM projects for schools, franchises, makers and tinkerers. We have developed hundreds of interdisciplinary projects for STEM / STEAM programs and international K-12 schools, including:

- Programming languages: JavaScript, Java, Python, Scratch, C
- Arts and Digital Arts tools: Photoshop, Inkscape, TinkerCAD, Scratch, arts and crafts materials, 3D printing, laser cutters
- Robotics and Electronics: Arduino, Lego WeDo, Lego EV3, Makey Makey and Cubetto

Just CODING - Remote work from Toronto, ON - *Content Developer*

May 2020 to July 2021

- Development of content for 5 Workshops for primary, secondary and high school educators using STEAM (Science, Technology, Engineering, Arts and Math) and Creative Learning methodology.

Juno College of Technology - Toronto, ON - *Instructor*

September 2020 to July 2021

- Instructor / Mentor at the Web Development, JavaScript and Bootcamp courses teaching HTML, CSS and JavaScript. Other technologies covered: jQuery, GitHub and Firebase.

Crowdmark - Toronto, ON - *Customer Service Manager*

February 202 to May 2020

- Interaction with hundreds of Professors, TAs and students in some of the largest Colleges and Universities in Canada. Customer Support of hundreds of requests weekly, providing a bridge between the technical team and clients and solving technical issues.
- Development and implementation of automated tests for Quality Assurance prior to the release of new features. Testing for detection of bugs and areas for improvements.

Just CODING - Brazil - *Founder, Academic and Executive Director*

November 2015 to December 2019

- Founding of a private after school program, including infrastructure, human resources, methodology, online and offline media presence.
- Management of a private after school program, including interaction with parents, students and partnerships with 5 major educational institutions.
- Coordination, support and training of more than 50 teachers, performing all the tasks involved with Administrative Support and Assistance.
- Development of more than 200 curriculum-integrated interdisciplinary tutorials and classes for schools using coding, electronics and robotics.
- Director for one year of a Maker Space for Fundação Torino International School, developing over 90 interdisciplinary projects using Arduino, Makey Makey, electronics and robotics in subjects such as Geography, Math, English, Spanish, Science, P.E., Music and more.
- Development of Coding Workshops for Adults in Computer Programming, Databases and Artificial Intelligence (AI), WebDesign (HTML + CSS) and Arduino.
- Development of content for 16 terms of the SMART (Science, Math, Arts, Robotics and Technology) after school program for children from 4 to 17 year old.

Colégio Logosófico, Brazil - *Professor (Part-time)*
April 2017 to March 2018

- Colégio Logosófico is a renowned primary, secondary and high school. In partnership with a certified High School teacher, I was the Coding teacher, teaching the students how to develop an APP, learningJavaScript, Interface Design and DataBases.

Zunnit technologies, Brazil - *Product Manager*
November 2013 to November 2015

- Responsible for the product development of recommendation systems in a Startup that offered AI products to large companies in Brazil.
- Management and specification of the entire product line life cycle from planning to production, with on-going visits to potential and current customers.
- Responsible for specification of features, quality assurance and client satisfaction.

Grupo IBMEC Educacional SA, Brazil - *Professor (part-time)*
August 2012 to December 2013

- Teaching of Electronics, Programming Languages (C++, Java and VBA) and Excel applied to Business, Economy and Engineering to more than 250 students.

Dedutiva Serviços de Informática, Brazil - *Founder, Customer Service Manager*
January 2004 to December 2013

- Responsible for sales, product development and customer services for clients in Brazil, USA and the United Kingdom.
- Development of the visual identity for the company based on the core values of the company: reliability, customization and fast delivery of software.
- Co-authoring of a course in Software Architecture.

Minas Gerais Educação LTDA - BH, Brazil - *Professor (part-time)*
August 2010 to March 2013

- Teaching of Circuits, Electromagnetism, Antennas, Calculus and Programming (Java, C++).

Pitágoras Sistema de Educação Superior - BH, Brazil - *Professor (part-time)*
May 2008 to May 2010

- Teaching Calculus for more than 60 students.

Fundação Cultural de Belo Horizonte - BH, Brazil - *Professor (full-time)*
February 2004 to July 2009

- Teaching of Circuits, Electromagnetism, Antennas.

- Supervision of 13 undergraduate students, one master student and one Ph.D. student.
- Development of several research projects, with publications including IEEE.
- Awarded best teacher of the course by the students.

PUBLICATIONS

RODRIGUES, A. O. ; MALTA, L. R. P. ; VIANA, J. J. ; RODRIGUES, L. O. C. ; RAMIREZ, J. A. . A Head Model for the Calculation of SAR and Temperature Rise Induced by Cellular Phones. IEEE Transactions on Magnetics, v. 44, p. 1446-1449, 2008.

RODRIGUES, A. O. ; VIANA, J. J. ; RODRIGUES, L. O. C. ; RAMIREZ, J. A. . Calculation of Temperature Rise Induced by Cellular Phones in the Human Head. Journal of Microwaves and Optoelectronics, v. 6, p. 310-322, 2007.

RODRIGUES, A. O. ; RAMIREZ, J. A. . A Thorough Analysis of SAR Evaluation in Human Head Models. In: Progress in Electromagnetics Research Symposium, 2012, Moscow. Proceedings PIERS 2012, 2012. v. 1. p. 750-754.

RODRIGUES, A. O. ; VIANA, J. J. ; RAMIREZ, J. A. . LogicView: An Open Source Software for 3D Visualization of Models and Fields in Electromagnetics. In: Progress in Electromagnetics Research Symposium, 2012, Moscow. Proceedings PIERS 2012, 2012. v. 1. p. 298-302.

RODRIGUES, ANA O. ; VIANA, JULIANO J. ; RAMIREZ, JAIME A. . A Java platform for the implementation of the finite-difference time-domain method. In: 2011 SBMO/IEEE MTTS International Microwave and Optoelectronics Conference (IMOC), 2011, Natal. p. 927.

RODRIGUES, A. O. ; VIANA, J. J. ; RODRIGUES, L. O. C. ; RAMIREZ, J. A. . Temperature Rise Calculation in the Human Head Induced by Cellular Phones. In: International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, 2006, Graz. Proceedings of the IGTE 2006.

RODRIGUES, A.O. ; VIANA, J.J. ; RODRIGUES, L.O.C. ; VASCONCELOS, J.A. ; RAMIREZ, J.A. ; GREEN, T. ; FREEMAN, E.M. . 3D visualization of temperature distributions induced by a cellular telephone in a model of the human head. In: 2003 SBMO/IEEE MTTS International Microwave and Optoelectronics Conference IMOC 2003, 2003, Foz do Iguacu. (Cat. No.03TH8678). p. 339.

RODRIGUES, A.O. ; MALTA, L.R.P. ; BORSALI, R. ; TAKAI, R.B. ; CONHALATO, R. ; RODRIGUES, L.O.C. ; FREEMAN, E.M. ; GREEN, T. ; VASCONCELOS, J.A. ; RAMIREZ, J.A. . 3D simulation of SAR induced by mobile phones in the human head. In: Intermag Europe 2002 Digest of Technical Papers. 2002 IEEE International Magnetics Conference, 2002, Amsterdam. IEEE International Digest of Technical Papers on Magnetics Conference. p. FU9.

RODRIGUES, A.O. . SAR calculations in an anatomically realistic model of the head of cellular phone users. In: Proceedings of CEM 2002 4th International Conference on Computation in Electromagnetics, 2002, Bournemouth. p. 62.

CAIRES, V. G. ; **RODRIGUES, A. O.** ; VILAS BOAS, C. W. ; PORTO, E. W. ; RAMIREZ, J. A. . Characterisation of Electromagnetic Fields from Cellular Phones in the Human Head. In: IX IEEE Conference on Electromagnetic Field Computation - CEFC 2000, 2000, Miwaukee, Wisconsin. v. I. p. 268-268.