

André Pacheco | Curriculum Vitae

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Education

- **Dalhousie University** **Halifax, Canada**
○ *Ph.D., Computer Science, Advisor: Prof. Dr. Thomas Trappenberg* *Jun 2019 – Feb 2020*
Visiting Graduate Research Student - VGRS
- **Federal University of Espírito Santo** **Vitória, Brazil**
○ *Ph.D., Computer Science, Advisor: Prof. Dr. Renato A. Krohling* *Aug 2016 – Aug 2020*
Research project title: Skin cancer diagnosis based on images acquired from smartphones and patient clinical information
- **Federal University of Espírito Santo** **Vitória, Brazil**
○ *Ms.C., Computer Science, Advisor: Prof. Dr. Renato A. Krohling* *Sep 2014 - Jul 2016*
Ms.C. thesis: Aggregation of neural classifiers via Choquet integral with respect to a fuzzy measure
- **Federal University of Espírito Santo** **Vitória, Brazil**
○ *B.S., Computer Engineering* *Mar 2009 – Aug 2014*
Undergraduate Program in Computer Science and Electrical Engineering
B.S. Thesis: Design of a fuzzy controller using differential evolution applied to a line follower robot

Awards, Honors and scholarships

- **Sep 2010**: 1st place (out of 31 teams) in the Latin America Robotics Competition (LARC), category IEEE-SEK, São Paulo, Brazil.
- **Oct 2011**: 1st place (out of 22 teams) in the Latin America Robotics Competition (LARC), category IEEE-SEK, Bogotá, Colombia.
- **Jul 2012**: The State of Espírito Santo Research Agency (FAPES) scholarship for undergraduate research (R\$ 4,800/year).
- **Oct 2013**: 2nd place (out of 19 teams) in the Latin America Robotics Competition (LARC), category IEEE-OPEN, Arequipa, Peru.
- **Nov 2013**: The best undergraduate research work in engineering and exact sciences at Federal University of Espírito Santo (out of 151 projects).
- **Sep 2014**: Full scholarship from Brazil's research agency CAPES (R\$ 18,000/year) for two-years master's degree program at Federal University of Espírito Santo.
- **Oct 2017**: Full scholarship from Brazil's research agency CAPES (R\$ 26,400/year) for four-years PhD program at Federal University of Espírito Santo.

- **Dec 2018:** The State of Espírito Santo Research Agency (FAPES) grant for the Ph.D. project (R\$ 132.100,00).
- **Aug 2019:** 4th place (out of 64 teams) in the International Skin Imaging Collaboration challenge - ISIC 2019 task 1.
- **Aug 2019:** 3rd place (out of 16 teams) in the International Skin Imaging Collaboration challenge - ISIC 2019 task 2.

Work Experience

- **Federal University of Espírito Santo** **Vitória, Brazil**
Teacher Assistant *Feb 2019 – Jun 2019*
 - I provided support for the UFES informatic department for C and Python programming languages
- **Federal University of Espírito Santo** **Vitória, Brazil**
Student Teaching Internship *Jun 2015 – Dec 2015*
 - Teaching programming in C language to engineering undergraduate students
- **Padtec S/A** **Vitória, Brazil**
Software Developer - Intern *Feb 2013 - Jan 2014*
 - Padtec is a global supplier focused on the development, manufacture, and marketing of turnkey solutions for optical systems.
 - I worked on a team that designed a software simulator to optical transport network (OTN).
 - Software programming in C++
- **Núcleo de Cidadania Digital - NCD** **Vitória, Brazil**
IT help desk - Intern *Feb 2011 - Mar 2012*
 - The NCD is a program of the Federal University of Espírito Santo that offers free products and services to the community in order to promote digital inclusion, stimulate the exercise of citizenship and democratic access to technological tools.
 - IT help desk.
 - Teaching elementary computer skills in Linux.

Volunteer Experience

- **PASUFES project** **Vitória, Brazil**
Teacher of physics *Feb 2012 – Dec 2012*
 - In Brazil, to be accepted in a university we need to take a test called by 'vestibular'. PASUFES was a free preparatory course for this test that has helped several low-income people to get a place in the college.
 - In this project, I taught physics (high school level).
- **Dermatological assistance program - PAD UFES** **Vitória, Brazil**
IT and management support *Jan 2018 – now*
 - This is a UFES program that provides skin cancer treatment for those people who cannot afford with a private health system.
 - Beyond it is involved with my Ph.D research project, I also provide IT and management support for this program.
- **Kangaroo Project** **Vitória, Brazil**
Data analyst *Aug 2018 – December 2018*

- This is a UFES project that takes care of pregnant teenagers in the Espírito Santo state. This issue is a huge problem in the whole Brazil and this project aims to help those teenagers and understand the data they collect in order to handle this problem.
- I support this project by providing data analysis for them.

Main publications

- Krohling, R. A., Pacheco, A. G. C. and Siviero, A. L.T. IF-TODIM: An intuitionistic fuzzy TODIM to multi-criteria decision making. Knowledge-Based Systems, v. 53, p. 142-146, 2013.
- Krohling, R. A. and Pacheco A. G. C. Interval-valued Intuitionistic Fuzzy TODIM. Procedia Computer Science, v. 31, p. 236-244, 2014.
- Krohling, R. A. and Pacheco A. G. C. A-TOPSIS – An approach Based on TOPSIS for Ranking Evolutionary Algorithms. Procedia Computer Science, v. 55, p. 308-317 , 2015
- Hrasko, R., Pacheco, A. G.C. and Krohling, R. A. Time Series Prediction using Restricted Boltzmann Machines and Backpropagation. Procedia Computer Science, v. 55, p. 990-999, 2015.
- Pacheco, A. G. C. and Krohling, R. A. Ranking of classification algorithms in terms of mean-standard deviation using A-TOPSIS, Annals of Data Science 5, 93-110, 2018.
- Pacheco, A. G. C, Krohling, R. and da Silva, C. A. Restricted Boltzmann machine to determine the input weights for extreme learning machines. Expert Systems with Applications, 96, 77-85, 2018.
- Pacheco, A. G. C, Krohling, R. An approach to improve online sequential extreme learning machines using a restricted Boltzmann machine. On IEEE International Joint Conference in Neural Networks, 2018

Technical and Personal skills

- **Natural Languages:** native Portuguese, advanced English and basic Spanish.
- **Programming Languages:** Python, Tensorflow, PyTorch, Java, Spring Boot, Angular, React-Native, Javascript, MATLAB, HTML, CSS, Latex.
- **Softwares:** Adobe Fireworks, WordPress, OpenScad
- **Hardwares:** Arduino and Raspberry-Pi

Additional activities

- I am a co-founder of the UFES' robotic team (ERUS). I was a team member from 2010 to 2014 and participated in different kinds of competitions with my team. Specifically in 2013, I was chosen the team leader, which was a unique experience I had in my undergraduate time.
- I maintain the website www.computacaointeligente.com.br in which I write in Brazilian-Portuguese about my topics of interest in an easily understandable level. My main goal with this blog is to help undergraduate students to understand the algorithms concepts.

- As you can see in my volunteer works, I am very engaged in social projects. I always try to use my knowledge for good causes. Currently, some friends and I are starting a project that aims to use technology to help subsistence farmers in the Brazil countryside.

References

- Available upon request.