

Luis Quintero

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SUMMARY

Electronics engineer, master's in health informatics, and currently pursuing a PhD in the field of machine learning and virtual reality technologies. Passionate about conducting research projects with academic foundation but with concrete real-life applications. Involved since 2015 in research institutes, mostly designing and developing interactive systems that contribute to physical and mental wellbeing by using cutting-edge technologies; mainly virtual reality, data science, signal processing, and human-computer interaction.

WORKING EXPERIENCE

2019/Jun – Present | RESEARCHER – PhD SCHOLAR

Stockholm University, Stockholm, Sweden

- Research area is the intersection between machine learning and immersive technologies. The problem of interest is how to use data from the interaction with systems for virtual reality training to identify the skill level of a user and adapt the task in such a way that improves their learning processes.

2018/Jun – Present | PROJECT MANAGER

PortalSense (<http://www.portalsense.com/>), Manizales, Colombia

- Personal entrepreneurship side project, leading the development of virtual reality systems and physiological data analysis with wearable devices to enhance traditional workflows in industries.

2017/Feb – 2017/Jul | VIRTUAL REALITY DEVELOPER

NeuroRehabLab (<http://neurorehabilitation.m-iti.org/>), Madeira, Portugal

- Design, and development of virtual reality solutions for neuroscience research, including cognitive and physical rehabilitation.
- Software development with wearable health monitors, using signal acquisition, data processing and communication interfaces with digital environments.

2015/Dec – 2017/Jan | PROFESSIONAL IN BIOENGINEERING

Center for Bioinformatics and Computational Biology (www.bios.co), Colombia

- Formulation, planning and software development of applied research projects aimed to create a novel and customized hardware-software system for industry, using computer vision and data science.

2016 Feb – 2016 Jun | UNIVERSITY LECTURER

Caldas University and Unitécnica, Manizales, Colombia

- Lecturer in the course “Microprocessors” for Bachelor students in Mechatronics Engineering.
- Lecturer in the course “Apps development with Unity” for Technical students of Visual Design.

2015 Apr – 2015 Oct | INTERNSHIP IN BIOENGINEERING

Center for Bioinformatics and Computational Biology (www.bios.co), Colombia

- Software development of human-computer interfaces for health applications and data visualization, using depth cameras for computer vision, and wearable hardware for real-time signal processing.

EDUCATION

2017 Aug – 2019 Jun | Master of Science in Health Informatics

Karolinska Institutet and Stockholm University, Stockholm, Sweden.

Study fields: Interaction Design for eHealth systems, data science, health protocols and entrepreneurship.

Thesis topic: Thesis in progress, preliminary title is “Facilitating the development of mental health solutions with virtual reality and health wearable devices”

2010 Feb – 2015 Jun | Bachelor's Degree in Electronics Engineering

National University of Colombia, Manizales, Colombia.

Study fields: Image and signal processing, control systems, telecommunications.

Grade Point Average: 4.4/5.0

2009 Aug – 2011 Jun | Vocational Technical Degree in Computer Systems

Unitécnica, Manizales, Colombia.

- Basic principles of computer systems, web development, databases, software setup and hardware maintenance.

PUBLICATIONS

Journal

- 2018** Badia, S. B. i, **Quintero, L. V.**, Cameirao, M. S., Chirico, A., Triberti, S., Cipresso, P., & Gaggioli, A. *Towards Emotionally-Adaptive Virtual Reality for Mental Health Applications*. IEEE Journal of Biomedical and Health Informatics, <https://doi.org/10.1109/JBHI.2018.2878846>

ACADEMIC AWARDS & SCHOLARSHIPS

- 2017 Scholarship for Master Studies:** Two-year fully funded scholarship by the Swedish Institute.
2015 Award in Bachelor Program: Best 10% GPA and top-best result in national examination.
2014 Scholarship for International Training: Two weeks ICT program in China, private company grant.
2013 Scholarship for Bachelor Studies: Four tuition fee exceptions due to academic performance.
2009 Scholarship for Technical Degree: Two-year fully funded scholarship, private company grant.
2009 Award in Upper-Secondary High School: Best academic performance among graduated students.

LANGUAGES

- **SPANISH:** First Language.
- **PORTUGUESE:** Limited Working Proficiency
- **ENGLISH:** Professional Working Proficiency. Academic IELTS **Score:** 7.0/9.0 | **CEFR:** C1

PROJECTS PORTFOLIO

The following list describes the personal and institutional projects with relevant participation. More details about the portfolio and specific contribution can be found in: <https://luiseduve.github.io/tabs/portfolio/>

- 2020 Excite-O-Meter:** Unity plugin that facilitates incorporating cardiac information in virtual reality applications. Useful in user-research and scientific experiments, it allows to collect, analyze, and visualize the level of physiological reaction (excitement) in any virtual experience.
- 2018 EasyBlood:** Mobile VR application for children pain management, currently being presented in Swedish hospitals to extend it as a research project. Course project at Karolinska Institutet, Sweden.
- 2018 ArmRehabVR:** Mobile-VR environment to support rehabilitation of spinal cord injury, controlled remotely through EEG signals. Part of a PhD project in Cali, Colombia.
- 2018 BioPhyS:** VR-based system to enhance cognitive skills in virtual military training, using physiological signals to deliver biofeedback in military personnel. Part of a PhD project in Hampton, USA.
- 2017 3Dream:** VR-based system used to train emotional regulation in psychology, it monitors physiological signals to estimate user emotional state using data science algorithms. Madeira, Portugal.
- 2017 BL-Engine:** Software tool designed for an easy creation of physiologically modulated interactive systems by means of wearable sensors. Madeira, Portugal.
- 2015 ViLimbs:** System to improve rehabilitation for phantom limb pain, using augmented reality and multisensory biofeedback to control virtual limbs through body signals. Manizales, Colombia.

ADDITIONAL COURSES

IN-CLASS COURSE

- 2018/May “*Building Innovation Strategies*”, 16 hours, School of Entrepreneurship of Stockholm.
- 2016/Nov “*Scientific Computing, Big Data and Simulation*”, 120 hours, ICT Ministry of Colombia.
- 2016/Aug “*Exploring Physiological Data for Interactive Applications*”, 16 hours, BIOS, Colombia.
- 2016/Jul “*Fundraising for Science & Technology Projects*”, 16 hours, BIOS, Colombia.
- 2011/Jul “*Computers Maintenance*”, 120 hours, Unitécnica, Colombia.

MOOCs

- 2015 “*Management of Development Projects*”, IADB on EdX.
- 2015 “*Computation Structures: Digital Circuits*”, MIT on EdX.
- 2014 “*A System View of Communications*”, Hong Kong UST on EdX.
- 2014 “*Introduction to Computer Programming*”, IIT Bombay on EdX.
- 2014 “*Fundamentals of Electrical Engineering*”, Rice University on Coursera.
- 2013 “*Beginning Game Programming with C#*”, University of Colorado on Coursera.