

ROGER BOLDÚ

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EDUCATION

Visiting Researcher at MIT Media Lab

Cambridge, MA, USA

Sept 2014 - Present

B.S. Thesis supervised by Pattie Maes.

B.S. in Electronic System Engineering in Communications

Barcelona, Spain

Sept 2010 - Present

La Salle Ramon Llull University

Cisco Certified Network Associate 1

Barcelona, Spain

2012

La Salle Ramon Llull University

RESEARCH EXPERIENCE

Research Assistant at MIT Media Lab

Sept 2014 - Present

Massachusetts Institute of Technology, Cambridge, Massachusetts, US

TAGME. Leading the hardware design and manufacturer of a wearable device that can recognize any object or surface the user is touching. The platform has a RFID reader/writer, and multiple sensors, which allow the user to create different interactions with a passive physical object.

SOLE2SOUL. Designing a new city to human interface using shoes as a medium that permits communication between people and their surrounding, in order to know who was in a concrete space previously. I actively participated in the concept idea and lead the hardware development of the interface.

Research Assistant at Pal Robotics

Sept 2013 - Aug 2014

Pal Robotics, Barcelona, Spain

Collaborating with engineers from Pal Robotics to create new interactions with the humanoid REEM in order to complete the RoboCup@Home 2014 in Brazil. The project was developed using Python on ROS, and had about 1,700 commits at GitHub.

Research Assistant at Human Computer Interaction Department

Sept 2012 - Jul 2014

La Salle Ramon Llull University, Barcelona, Spain

VLEO. Creating new interactions with a pet robot named Pleo. Pleo was used to help children in medical treatments, but we observed that their behavior was constrained and produced frustration for the children. We proposed to mix a physical and virtual Pleo, in order to increase the interaction with users, and teach kids how to take care of the pets. I actively participated in the concept ideation, leading the hardware design and also the backend software of the interface.

SMARTBLOCKS. Designing the concept and implementing part of the prototype of an intelligent piece of Lego in order to improve the experience of playing with it. The goal of the project was to create an interface to push user's creativity and also to teach how to build different structures as they have a visual information of each blocks position.

MOUSECAM. Creating an interface to control the computer mouse, using an RGB camera and basic computer vision. It enabled the user to use numerous gestures for different purposes, augmenting the interactivity with the computer.

Research Assistance at Robotics Department

Sept 2011 - Jul 2013

La Salle Ramon Llull University, Barcelona, Spain

VEX World Championship 2013. Team Leader at the International Robotics Competition. Leading a robotic team with the goal of creating two collaborative robots designed to achieve an objective, redistribute sacks on a concrete arena. We obtained the 3rd European position in VEX World Competition held in California.

FLOWERSUMO. Creating a bidirectional robot with a fluid movement simulating a flower, in order to avoid collisions with the enemy. This project was in the framework of the Spanish National Sumo Robotics Competition.

TEACHING EXPERIENCE

Computer Science Department

Jul 2013 - Jul 2014

La Salle Ramon Llull University, Barcelona, Spain

TEACHING ASSISTANT AT OPERATING SYSTEMS. It is a 3rd year subject of Computer Engineering and its learning outcomes are mastering Advanced C Language in Linux Operative System, usage of different kind of tools like POSIX sockets, message queues, pipes, and shared memory. I was responsible to create several hands-on sessions, mentor students at the lab and, designing the main assignment.

TEACHING ASSISTANT AT DIGITAL SYSTEMS AND MICROPROCESSORS. It is a 2nd year subject of Computer Engineering, Telecommunications. The learning outcomes are programming microcontrollers, in Assembler and C, and designing digital systems with Small Scale Integration (SSI) devices. I was responsible to present assignments to students and mentor them at the laboratory sessions. Assisting them on understanding theoretical of the digital design and troubleshooting PIC Microcontrollers-based boards.

GRANTS

Funitec Foundation Grant to support my research at La Salle Ramon Llull

AWARDS

Make Me++ MIT Media Lab Hackathon USD 3,000 Dollars Best Idea Award- Winners Hackathon.

SKILLS

Programming Languages: Python, Java, C, LabView.

Simulation: Matlab, Spice.

Hardware Design: Altium, Eagle, Orcad, Proteus.

Firmware: Assembly, C, VHDL.

Design: Photoshop, Illustrator, SolidWorks

Prototyping: Milling Machines, 3D printing, Laser Cutter, Processing, Arduino.

Languages: Fluent English, Spanish(Native)