Alberto Isaac Barquín Murguía

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Academic history

2014- **MSc. in Space Technology**
University of Würzburg, Germany (1st semester)
Project: *CanSat Object Detection and Ranging*
Mechanical design and embedded programming
Luleå University of Technology, Sweden (2nd semester)
Université Paul Sabatier Toulouse III, France (3rd semester)

2008-2012 **Mechatronics engineer**
National Autonomous University of Mexico
Faculty of engineering
Thesis: *Implementation of a controller in a commercial quadrocopter*
Developed custom firmware in C++ in order to implement both higher order sliding modes controller and observer in an AR Drone

Professional experience

September 2013-May 2014 **Brigadist at Lab for Mexico City**
as part of the project Code for Mexico City, partner with Code for America. Worked on http://www.verificalo.mx a site that helps car users in Mexico City to fulfill their obligations

August 2012-February 2013 **Computer technician**
Part time job at Deportes Martí

May 2012-November 2013 **Social Service**
National Autonomous University of Mexico
Mechanical Design and Technological Innovation Center

2007 **Internship**
240 hours. Technical assistance department of Mexican National Petroleum Company (PEMEX)

Languages

Spanish:
Native

English:
Advanced
TOEFL IBT: 102

German:
Advanced
Last coursed level: C1

Knowledge and technical skills

Programming languages
Python, PHP, C/C++, C#

Operating systems
GNU/Linux, Windows

Mathematical software
MatLAB/Simulink. Maple

Other software
Git, OpenVPN, Office, SolidWorks

Volunteering and Personal projects

- As a volunteer renovated a school house at Skolgården, Skinnskatteberg, Sweden; planted crops and cared for animals at Liedtke Farm, Leipzig, Germany; receptionist at Fabrizzio's Terrace hostel, Barcelona, Spain.
- Image processing and Computer vision: image compression with uneven pixels, generate images with genetic algorithms, face recognition, character recognition through a neural network, image improvement using Python.
- House automation system using a custom made HTTP server to control a house model through a microcontroller. Python and C++ used for programming.