

# Felipe Smith

## Curriculum Vitae

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Electrical Engineer and Master's student in Computer Science with interest on Robotics, Artificial Intelligence, Software Development, Computer Vision, Education and Scientific divulgation.

### Educación

- 2016–now **Master's student on Computer Science**, *Universidad de Chile*, Santiago.  
Expecting on graduate on March 2018 - Thesis project on software engineering for education
- 2008–2015 **Electrical engineer**, *Universidad de Chile*, Santiago.  
Graduated with the highest distinction - top 15% of the generation

### Working experience

- Apr 2016 **Project engineer**, *EdV program, University of Chile*, Santiago.  
Now Creation of a electronics maker kit for sustainability projects on schools.
- Mar 2016 **Research Assistant**, *Computer Science Department, University of Chile*, Santiago.  
Now Different research works on CS education for high schools and university levels
- Sep 2015 **Development engineer**, *National Seismological Center (CSN)*, Santiago.
- Mar 2016 Code adaptation of a external Earthquake Early Warning system to the Chilean scene
- Mar 2014 **Research Assistant**, *Advanced Mining Technology Center - Digital Image Processing*  
Oct 2014 *lab*, Santiago.  
Multicam GUI implementation for mining work area surveillance
- Apr 2013 **Research Assistant**, *Advanced Mining Technology Center - Digital Image Processing*  
Jan 2014 *lab*, Santiago.  
Creation of a image marker for database creation using Python and Matlab
- Jan 2013 **Internship**, *Compañía Minera Doña Inés de Collahuasi*, Iquique.
- Feb 2013 PLC programming for automation of conveyor belt replacing site
- Mar 2011 **Research Assistant**, *University of Chile, Electrical Engineering Department-*  
Mar 2013 *Robotics lab*, Santiago.  
Robotics 'Homebreakers' team member, @Home category.  
Participation on robotics world cup (Robocup) during 2011 y 2012, on Istambul and Mexico City
- Jan 2011 **Research Assistant**, *Advanced Mining Technology Center - Robotics lab*, Santiago.  
PCB design and construction for low level control of an autonomous vehicle
- Aug 2010 **Research Assistant**, *University of Chile, Electrical Engineering Department-*  
Jan 2011 *Robotics lab*, Santiago.  
Construction of control electronics for biped robot

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## Teaching Experience

- 2014 **Professor. Arduino based electronics**, *EdV program, University of Chile*.  
Now High School oriented programming course based on Arduino technology
- 2011 **Professor. Robotics**, *EdV program, University of Chile*.  
Now Robotics course oriented to 8th grade students using Arduino based and LEGO EV3 based robots
- 2012 **Robotics team coach**, *EdV program, University of Chile*.  
Now Coach of school robotics team Robotec 2. National third place in FIRST LEGO League Chile on 2013 and finalist in FIRST LEGO league open european championship, carried out in Spain on May 2014

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## Programming skills

<b>OS</b>	Windows, Linux	<b>Languages</b>	Java, C++, C, Python, Matlab
<b>GUI</b>	Qt, JavaFX	<b>PCB Design</b>	Eagle, CircuitCAM, LDKF Sdk
<b>Others</b>	ARDUINO, LEGO NXT/EV3, OpenCV		

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## Publications

- [1] Claudio A Perez, Carlos M Aravena, Daniel Schulz, Leonardo Cament, Luis Castillo, Felipe Smith, and Pablo A Estevez. Automatic safety video surveillance-tracking system to avoid vehicle-workers interaction for mining applications. In *Optomechatronic Technologies (ISOT), 2014 International Symposium on*, pages 23–27. IEEE, 2014.
- [2] Javier Ruiz-del Solar, Mauricio Correa, Rodrigo Verschae, Fernando Bernuy, Patricio Loncomilla, Mauricio Mascaró, Romina Riquelme, and Felipe Smith. Bender: A general-purpose social robot with human-robot interaction capabilities. *Journal of Human-Robot Interaction*, 1(2):54–75, 2012.

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## Personal interest

- Photography
- Video game design
- Education
- Cuisine
- Travels