# **Arthur Valiente**

Research Engineer Robotic - Automation Embedded Systems



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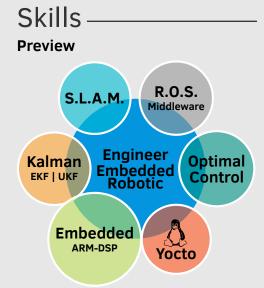
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ArthurVal



### **Programming skills**

C • C++ • Python • Git • R.O.S.

Bash • CMake • Make • Emacs

Matlab • Simulink

JavaScript • LETEX

#### Languages

English

Spanish • Japanese

## **Education**

2012 - 2015 Master degree in Engineering: Electrical & Automation INP-ENSEEIHT

- Control, Decision and IT for Critical Systems (CDISC)
- Development of Critical IT Systems (DeSIC)

2010 - 2012 2-years University degree in technology (HND) I.U.T Paul Sabatier, Toulouse

- Physicals Measurements
- · Instrumental Techniques

2010 A-level in Engineer Science

Lycée Alexis Monteil, Rodez

# **Experience**

Jul 2018 -

Now

**Fixed-term contract: Research Engineer, 18 months** CEA-DRF-IRFU, Paris **SVOM Project**: In charge of the automatic test bench of the onboard software for the ECLAIRS Gamma-Ray instrument

- CEA IRAP CNES collaboration
- Development of the distributed Local Test Unit (2x Zedboards, PC, ...)
   (C++, Python)
- PyTest testing framework development
- Development of scripts associated to the unit test case (Python)

Jan 2017 - **Fixed-term contract: Research Engineer, 12 months** CEA-DRT-LIST, Paris Dec 2017 In charge of the software development for robotic applications

- Co-responsible of the software development (Git Admin R.O.S.)
  - Voronoi diagram & Occupancy grid algorithms development (C++)
- Hybrid topological SLAM for mobile robot (Lidar / IMU / RBG-D Camera / ...) (C++)
- FACE Project: In charge of the multi-SoC prototype (Renesas R-Car H3, Nvidia Tx3, Kalray MPPA Bostan)
- · Linux Yocto layers development for R-Car H3

Sep 2015 - **Fixed-term contract: Research Engineer, 3 months**Dec 2015 **ANR RIDDLE Project**: Development of the robotic demonstration on PR2 and ROMEO robots

- Importing object recognition and human interaction (vision and voice) algorithms on ROMEO robot of Aldebaran Robotics
- Creating a bridge between object recognition algorithms simulator using R.O.S. (C++)

Mar 2015 - Internship: Computer Vision data fusion CNRS-LAAS, Toulouse
Sep 2015 ANR RIDDLE Project: Fusion of computer vision & radio-frequency method for object recognition

 Development of object recognition software on R.O.S. using RGB-D Kinect camera (LINEMOD & TABLETOP) (C++)

Creating a custom communication protocol using UART on DSP (C, C++)

Feb 2015 - Student Project: Sound sources localization CNRS-LAAS, Toulouse
Mar 2015 TWO!EARS Project: Probabilistic algorithms for binaural sound sources
localization

- Multi-Hypothesis Unscented Kalman Filter (MH-UKF) (C++)
- Binaural sound sources localization on R.O.S. (C++)

Jul 2014 - Internship: Technician Cassidian Test & Services, Colomiers

Aug 2014 Technician Internship - PCIe link on FPGA (VHDL)

Jul 2013 - Intership: Worker Tokyo / Kitakyushu, Japon

Aug 2013 House painter

Apr 2012 - Internship: Technician GTP Technology, Labège

Jun 2012 Instrumentation technician - Data acquisition (Modbus, UART, RS-485)