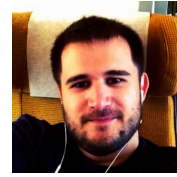


Rodríguez Canosa, Gonzalo Ruy

Microservices Developer

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*PhD in Robotics and Industrial Engineer.
10 years of experience in SW(+HW) projects.
Great coding skills. Interested in microservices design and architecture.*

Profesional Experience

Working

- Mar 2015 **Senior Software Development Engineer**, *SEPSA*, Pinto, Madrid, Spain.
Now Multiple technologies integration and software development for projects in the Railway Industry; i.e., CCTV systems or passenger information and entertainment systems.
- Feb 2014 **Senior development engineer**, *eProxima*, Madrid, Spain.
- Feb 2015 Real Time Publisher Subscriber (RTPS) implementation (DDS standard by the OMG) focused on performance and security.
- Feb 2009 **PhD researcher**, *Robotic and Cybernetic Group*, Madrid, Spain.
- Nov 2013 MultiRobot Systems for security and surveillance in Critical Infrastructures.
- Sep 2011 **Visiting researcher**, *Robotics Research Group (UoA)*, Auckland, New Zealand.
- Dec 2011 Dynamic object detection system from UAV based on optical flows differences, supervised by Dr. Bruce MacDonald
- May 2008 **Trainee Engineer**, *Flight Science Dept. at Bombardier*, Montreal, Canada.
- Aug 2008 User interface to optimize the documentation process of the simulation and testing reports.

Scholarships and Grants

- Feb 2008 **Research scholarship**, *Transportation Engineer Dept.*, University of Seville, Spain.
- Apr 2008 Study of the CANBUS devices, protocols and data in different automobiles.
- Nov 2007 **Final Degree Project**, *Automatic and Systems Engineering Dept.*, Seville, Spain.
- Jan 2008 Transportation and storage problem resolution using centralized control algorithms.

Technical capabilities

Computer Skills

- C++ Experience in different projects with multiple libraries (Boost, OpenCV, STL, C++11). Performance improvements techniques and profilers tools. GDB debugger, Valgrind, ...
- Python Experience with different multi-purposes modules. Object oriented programming. Experience with data analytics libraries such as pandas, numpy, matplotlib, seaborn, bokeh, folium, ...
- Microservices Functional and Reactive Programming with Scala, Akka, Slick, Play, Lagoom, Elastic, Logstash, Kibana, Spark. Microservices design and architecture.
- + Languages Javascript, HTML, Go, C#, Java, SQL, bash, batch
- Programming Object Oriented Programming, concurrency and multithreading issues. Experience in Functional Programming. UML design. Qt GUIs. SW architecture.
- DevOps Git, Docker, Maven, SBT, Kubernetes, AWS, SVN, Vagrant, Ansible, CMake, Makefile,...
- Development IntelliJ, Eclipse, Jupyter notebooks, Microsoft Visual Studio, Microsoft Visual Studio, ... SCRUM methodologies and Agile development. TDD.
- Linux Large development experience in Linux based systems using terminal-based utilities.

Engineering Processes

Production	Experience in the full product cycle from prototypes validation, to testing, to validation, to client technical support.
Hardware	Sensor and actuator control. I2C, 485, ethernet,... Experience with train related equipments: cabin monitors, cctv cpus, passenger monitors, TCMS, MVB,...
Simulation	Webots, Player-Gazebo, Simulink.
Matlab	Fast prototyping of algorithms. Graphical Interfaces.
Robotics	Mobile and aerial robotics (UGV y UAV), Robot Operating System (ROS).
Vision	Expert development in OpenCV and PCL (Point Cloud Library).

Education

2018-2019	Bootcamp Full Stack Developer with reactive patterns , <i>4 months</i> , Datahack school, Madrid, Spain.
2009-2013	PhD in Robotics and Automatics , <i>4 years</i> , Technical University of Madrid, Spain.
2008-2010	MSc in Automatics and Robotics , <i>2 years</i> , Technical University of Madrid, Spain.
2006-2007	Erasmus , <i>1 year</i> , Royal Institute of Technology (KTH), Stockholm, Sweden.
2002-2008	MsC in Systems and Automatics Engineering BSc in Industrial Engineering , <i>5 years</i> , University of Seville, Spain.
2000-2002	Secondary Education in High-School Martinez Montañés , <i>Seville</i> , Spain. International Baccalaureate Organization Diploma - IBO.
1988-2000	Primary Education in German School Albrecht Dürer , <i>Seville</i> , Spain.

Self-education

- **Python mega course**: building 10 real-world applications. Python course covering web, databases, web scraping, data science, web visualizations, image processing.
- **Functional Programming in Scala Specialization**. Using Scala to analyze data sets small to large; from parallel programming on multicore architectures, to distributed programming on a cluster using Apache Spark. Completed 2 of the 5 courses:
- **Managing Big Data with MySQL**. Execute the most useful query and table aggregation statements for business analysts, and practice using them with real databases.

Languages

Spanish	Native language	
English	Full professional competence	<i>High written and spoken level.</i>
German	Basic professional competence	<i>'Zentrale MittelstufePrüfung' of the Goethe Institut (C1).</i>

Personal projects

- Home Automation. Control of home devices (mainly electrical sockets and lights) using [HomeAssistant](#) and [ZWave](#) products on a [RaspberryPi](#).
- Telegram bots. Personal [telegram bots](#) programmed in Python using [python-telegram-bot](#).
- Web Scrapping. Real-time web analysis for low-price products notification using python and BeautifulSoup.
- Web Monitoring. Real-time analysis of train tickets prices for low-prices notifications using python and selenium. [renfe-notifier-bot](#)