Diogo Silva

Curriculum Vitae

Experience

Vocational

2016-Present **Software Developer**, Portuguese Air Force Research, Development and Innovation Center, Sintra.
- Maintenance and development of UAV onboard systems (ROS, C++).
- Maintenance and development of UAV ground systems (ROS, C++, Python).
- Full-stack development of ground systems (Python + HTML/Javascript/CSS).
- Development for European project SUNNY (2017-2018, sunnyproject.eu)
- Development for FIREFRONT project (2020, firefront.pt)

2016-Present **Teaching**, Portuguese Air Force Academy, Sintra.
- Programming 2016/17 - 2020/21.
- Co-supervisor on Masters dissertation 2016/2017.

2013, 2014 **Summer Internships**, Portuguese Air Force, Lisbon.
Detailed achievements:
- 2014 - Brief study of Electronic Warfare; development of a Java application allowing for parameterized search over a set of data received by XML file; development of a configurable Java application that converts data from different formats to XML.
- 2013 - Study of internal security regulations within the Portuguese Air Force and technical solutions for alarm systems; development of a project for an alarm system for a section of the perimeter of a military base.

Miscellaneous

2012 **Summer Intern**, Portugese Air Force, Lisbon.
Brief study of technical theory in the areas of communications, networks, servers, security and electronic warfare.

Education

2012–2015 **Masters in Electrical and Computer Engineering**, *Instituto Superior Técnico*, University of Lisbon, Specialization in Computers and Control.

2009–2015 **Masters in Electrical Engineering**, *Portuguese Air Force Academy*.

Masters Thesis

Title *Efficient Evidence Accumulation Clustering for large datasets/big data*

Supervisors Professor Ana Fred & Dr. Helena Aidos

Description	This thesis focused on exploring the feasability of applying Evidence Accumulation Clustering to large datasets. I explored different areas from quantum clustering techniques to GPU based alrogithms. The result was the development of solution that is several times faster and more memory efficient than the origina, using different strategies.

Publications

- D. Silva, H. Aidos, and A. Fred, "Efficient evidence accumulation clustering for large datasets," in *Proceedings of the 5th International Conference on Pattern Recognition Applications and Methods - Volume 1: ICPRAM,*, pp. 367–374, 2016

Projects

2012	**Android App**.
	- Development of Android application within the context of a UAV project (the PITVANT).
	- Application used inbuilt GPS module of modern smartphones and sent data to remote server.

Awards

2011/12	OGMA, Portuguese Aeronautic Industry Award – Best Electrical Engineering student.
2014/15	IST, Diploma for Academic Merit
2015/16	IST, Diploma for Academic Excellence
2016	Armed Forces Communications and Electronics Association, Honor Award for Outstanding Academic Excellence

Technical skills

Profficient	PYTHON, C
Works with	JAVASCRIPT, C++
Frameworks	ROS, FLASK, SCIPY/NUMPY, TENSORFLOW
Familiar with	JAVA, MATLAB
Other tools	Linux, LATEX, SQL, NoSQL
Hardware	VHDL, FPGA, Arduino, IoT

Languages

Portuguese	**Mothertongue**
English	**Fluent**

Personal interests

- Reading
- Climbing
- Traveling
- Running