Willian Galvani

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EDUCATION

UFSC
Computers Science Bachelor's
Incomplete: 2008-2010

5-Years Degree on Control and Automation Engineering
(IAA 7.0) (GPA 3)
Merit-based scholarships: 100%
2011 - 2017

SEAMK
(Automation Engineering Exchange Student)
2014.2-2015.2

SKILLS

Programming

Python	●●●●●●●○○○
C	●●●●●●○○○○
C++	●●●●●○○○○○
C#	●●●●●○○○○○
LATEX	●●●●●○○○○○
MATLAB	●●●●●○○○○○
HTML	●●●●●●○○○○
JavaScript	●●●●●●○○○○

Frameworks/Libraries

Arduino	●●●●●●●○○○
Django	●●●●●●●○○○
Ionic	●●●●●○○○○○
OpenCV	●●●●●○○○○○
Qt	●●●●○○○○○○

Others

GIT	●●●●●●●○○○
Inventor	●●●●●●○○○○
Linux	●●●●●●○○○○
Networking	●●●●●●○○○○
SolidWorks	●●●●●○○○○○
Proteus	●●●●●○○○○○
V-REP	●●●●●○○○○○
Eagle	●●●●○○○○○○

1-Shallow knowledge.
2-Able to perform minor changes.
3,4-Able to develop small projects.
5,6-Comfortable with the tool, able to fulfill more complex tasks and projects.
7,8-Understands the inner workings of the tool.
9,10-Comprehensive knowledge regarding the tool's implementation, inner workings, and nuances, able to recreate it given enough time.

PROFESSIONAL EXPERIENCE

NOVARUM SKY
Full Stack Embedded Software Engineer.
(Python + Raspberry Pi + Gstreamer + Asterisk + JS + HTML + CSS)
March 2016 – Now
- Development of auxiliary drone systems for long-range High definition video and audio transmission.
- Development of an drone-based inspection system for industrial inspections.
- Design and manufacture of an VTOL fixed-wing aircraft for photogrammetry.

UFSC / FEESC / PETROBRAS
Derivative Free Optimization for Automatic Tuning of an Oil Well Simulator.
(Python + Matplotlib)
August 2016 – March 2017

- Use of tuners for optimization of black box functions.
- Implementation of derivative free optimization methods in Python.
- Implementation of a software interface between tuners and Petrobras in-house multi-phasic flow simulation software.

INSTITUTO SESI DE INOVAÇÃO
(C++ + Kinetis + Python + Asterisk)
Embedded software development.
August 2015 – February 2016

- Embedded Python development on Raspberry PI.
- Embedded C programming on freedom K64f platform.

UFSC - LABORATÓRIO DE CONTROLE DE AUTOMAÇÃO
(Python + Qt + Arduino)
ProVant- Project of an unmanned aerial vehicle.
July 2012 – June 2014

- Pilot e Developer at ProVant, the project of an autonomous Tilt-Rotor aircraft.
- Design and implementation of communication protocol between UAV and ground station.
- Assistance on electrical, electronic, and mechanical projects.
- Design and implementation of a ground station software using Python and Qt.

UFSC - DEPARTAMENT OF AUTOMATION AND SYSTEMS
(Python + Django + JS + CSS + HTML)
Website development and maintenance
August 2011 – December 2013
- Development and maintenance of both the Department of Automation and Systems and Control and Automation Engineering course websites.

Development of the Access Control System
November 2013 – June 2014
- Development and maintenance of a access control management system interface internal for the department and it's laboratories, interfacing with the built-in software on the controllers.

INTEREST AREAS

- RC Aircraft.
- Data Science
- Artificial Intelligence.
- Optimization.
- Programming.
- Mobile Robotics.
- Autonomous Vehicles
- Computer Vision.
- Software Defined Radio

LANGUAGES

- Portuguese (native)
- English (Toefl IBT 106/120)
- German (novice)

GITHUB

 GitHub.com/Williangalvani

WEBSITE

 GalvanicLoop.com

LINKEDIN

 Linkedin.com/in/willian-galvani-38417072

PROJECTS

UAV DESIGN/ASSEMBLY

- Quadrotors (MultiWii, ArduPilot, KapteinKuk).
- Trirotor (MultiWii).
- Tilt-rotor (MultiWii).
- Fixed-Wing Aircraft.

PROVANT GROUNDSTATION (PYTHON + QT)

- software developed for the PROVANT project, a tilt-rotor developed by UFSC and UFMG.

RPI MULTIWII FPV (PYTHON + QT)

- Experiments on the use of a Wi-Fi network for telemetry, video downlink, and control uplink. All links were implemented in UDP for a reasonable latency.

DRONE TOKEN TRACKER (PYTHON + OPENCV)

- Token tracking system by a quadrotor on the V-Rep simulator.

DIYOSD MULTIWII (ARDUINO + LOW-LEVEL + ELECTRONICS)

- Project of a low-cost OSD using only an Arduino and passive components, heavily execution time sensitive for data manipulation tasks.

AUTONOMOUS SOLAR GLIDER (WIP)
(XFLR5 + 3D-PRINTING + ELECTRONICS)

- Design of an autonomous powered glider, autonomous both for navigation as in power generation.
- Objective of autonomously identifying and taking advantage of thermals.

VOLUNTEER WORK

ROBOTA -UFSC
MOBILE ROBOTICS COMPETITION TEAM.
March 2016 – now

- Development of autonomous robots for competitions.
- Development of open-source solutions and tools for mobile robotics.