David Bensoussan

Embedded Systems Engineer / Roboticist

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Recently graduated, I am able to develop **embedded solutions**. I like optimized conception, **smart and efficient work**. My projects are focused on embedded systems programming for **robots** and **Internet of Things**. I am currently at **Synapticon** since a year and half working on a two wheeled **autonomous robot targeting the consumer market** on high and low level software.

Education

ESIEA

2010 - 2015

GRADUATE SCHOOL OF ENGINEERING – MASTER 2

Embedded systems major, **3 years in robotics student organization** (including one year of presidency), robotics **courses and competition** organization.

Experiences

SYNAPTICON

March 2015 - today (1.5 years)
Full time

OS DEVELOPMENT, HIGH AND LOW LEVEL DEVELOPMENT SOFTWARE FOR AN AUTONOMOUS ROBOT TARGETING THE CONSUMER MARKET

- Low level software on XMOS **multicore chips**: **sensors** (laser, lidar, odometry) and **motor control** applications
- High level software with **ROS** (odometry, mapping, API from scratch) and introduction to localization and navigation in **C++ and python**
- Building optimized embedded systems using **Yocto** and managing a cross compiling server

Being in a small team, I have been involved in many different parts of the project: low level, high level, theory, benchmarks and testing in **indoor and outdoor with low budget and different weather conditions**. I worked in the **complete cycle of the project**, which not only **strengthened my programming skills** but also **professionalized** me.

MAINTOOL

April - July 2014
Internship

HEART RATE SENSOR DESIGN

Electronic design of the **main sensor** of a connected watch strap, **based on LEDs and photodiode**. I also developed the software associated to it. It is now included in their main product (look for **Classi** on their website).

GANYMEDE

October 2014
Hackhaton 24h

WINNER OF INTEL'S IOT ROADSHOW (1500$)

Development of a device intended to **protect** people by displaying the **air quality** locally.

QUADCOPTER

October 2013 - Mars 2014
Project

DESIGN OF A QUADCOPTER FROM SCRATCH

Specification, conception and realization of a remote controlled quadcopter.

Skills

SYSTEM

Linux, Embedded interfaces, **Kernel**, RTOS, aws servers

LANGUAGES

C, **C++**, Python, shell

PLATEFORMS

Raspberry Pi, **XMOS**, Edison, Arduino

Robotics student organization

APEROBO

Organized an **appointment of 150 robotics enthusiasts** and a **competition between engineering schools**.

NUIT DU HACK (2011 - 2014)

Animated **workshops of hardware hacking**, Arduino and MSP430.

TRAINING

Gave **courses, training and guidance** in robotics to students.

Sotfware

Linux	★★★★☆
High-level	★★★★☆
Low-level	★★★☆☆
Sensors	★★★☆☆

ROS

Mapping	★★★☆☆
Localization	★★☆☆☆
Navigation	★★☆☆☆
Simulation	★★☆☆☆

Others

Yocto	★★★★☆
Algorithmics	★★★★☆
Git	★★★☆☆
Compilers	★★☆☆☆

Interests

Robotics · Entrepreneurship · DIY · Business · Web